Lecture
ON
SOME SPECIAL FEATURES IN THE HEART AFFECTIONS OF CHILDHOOD.

A Demonstration in connexion with the London Post graduate Course.

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GENTLEMEN,—My present design is to call attention to certain features of heart disease special to children, and apt, therefore, to be overlooked or misunderstood unless separately studied. What chiefly claims notice is the nature of functional heart disturbance and of carditis in these young subjects; the frequency of recovery from such conditions; and the fact that both are often expressed by physical signs merely, the child's general health being unaffected. The latency of early heart disease in children is due in large measure to the indefiniteness of child's rheumatism. Yet not to this alone. The physical indications themselves may be difficult. This is especially the case with pericarditis. The friction graze indicative of this inflammation may be so slight or so inconstant, or so precisely synchronous with the proper heart sounds, as to escape notice. The frequency of pericarditis in connexion with slight joint pains—which are really rheumatic—is on this account much under-estimated. Until the ear is attuned to them the many modes of pericardial rubbing are hard to catch. The obvious to-and-fro friction sound of extensive pericarditis in no way resembles it. What has to be listened for is the presence of a sound or of sounds over and above the endocardial, and nearer than they are. In very many cases it is only by long and repeated listening, both with the stethoscope (varying the pressure) and with the ear applied directly to the naked chest, that this graze will be revealed, presently it may be to disappear for a while, yet once heard of perfectly definite significance. In the ten examples of heart disease exhibited here at our last meeting no less than four had pericardial graze. In all of these the rubbing had been of fugitive character, sometimes present, sometimes absent, and in none was there any open symptom on the part of the patient likely to call attention to the heart.

But with the quickest ear the frequency of pericarditis is not to be estimated by audible friction only. There may be neither rub nor graze, and yet pericarditis, of which, in that case, the earliest certain sign is effusion. Evidence of this consists in a slight shifting to the left of the apex, and a slight broadening of the cardiac triangle near its base, physical signs too small to be estimated unless the exact apex place and the exact shape of the cardiac dulness have been previously ascertained.

The recurrence from time to time in rheumatic children of pericardial friction or slight effusion, with perhaps some joint pain and tenderness, but no repetition of the original rheumatic attack and no obvious disturbance of health, is an important element in prognosis. The pericardium is as the joints; pericarditis is the equivalent of arthritis. Every recurrence of joint pains in these subjects must be regarded as a fresh menace to the heart and suggest physical examination. Yet though the discovery of a pericardial graze is no doubt disquieting, it is not easy to see what good is to be got (pain being absent) by local applications or active treatment. If we could silence the rub it does not follow that we should therewith help the heart. What does silence it sometimes of a sudden and for ever is pericardial adhesion, an event we would avoid. Children who suffer these recurrent attacks are very apt in the end to become cardiac cripples; they need extra care, with protection from exposure, mental excitement, and bodily fatigue—all in their several degrees possible provocatives of rheumatism.

Now, pericardial rubbing in the circumstances we are considering, though it may be intermittent and hard to hear, yet once heard can have but one meaning. On the other hand, what precisely are the physical signs of early endocarditis nobody knows. Where there is pericarditis, provided it is rheumatic, we may almost assume that there is endocarditis also, which may or may not presently reveal itself by infallible physical signs after the exocardial rubbing has ceased. What I would now call your attention to is the extreme caution that is necessary before pronouncing that the altered heart signs—the murmurs and disturbed rhythm which, more or less, are invariable in child's rheumatism—are of such sort as to imply heart disease. Quickened action, "excited" impulse, uneven rhythm, soft apex murmur, double second sound at mid-sternum—these are habitually concurring heart signs in acute rheumatism. As the joint inflammation subsides and the heart steadies there comes the time of doubt as to its precise physical state—a doubt which is seldom quite resolved when the patient becomes convalescent and is dismissed. The subsequent return of some of these children may decide this question in so far as they are concerned. By that time some are found to have unquestionable signs of heart disease, and some have wholly recovered. But it is obvious that the former class will return in larger proportion than the latter; so that we can never be sure whether recovery is the rule or the exception.

The first of the patients now before you, L. W——, is a girl of seven. She was admitted for acute rheumatism, of which the joint symptoms were slight, and had nearly disappeared. There was a distinct blowing murmur at the apex just after and separate from the systole, conducted about an inch towards the axilla. In a few days this murmur became fainter, and in a week it had gone. There was next (Dec. 1st) a recurrence of articular rheumatism, with some fever, pain, and swelling of the left knee and knuckle of the left hand. Recovering from this second attack in a few days, it was now noted that the heart had become unrhythmical, but there was no murmur. On Dec. 18th, when the child seemed well, a faint rubbing was heard just to the left of the sternum at the third cartilage. It became louder, but lasted only a few days. A week later (Dec. 21st) a soft systolic murmur reappeared at the apex, not constant, while the second sound in the pulmonary area became reduplicated. The last note (Feb. 4th) is to the effect that the heart is unequal in force and frequency with soft systolic murmur, ill-conducted and sometimes hardly audible.

Here is a characteristic example of heart disturbance concurring with rheumatic arthritis. The two subside together, leaving it doubtful whether or not the heart has received permanent damage. The fact that pericarditis has been heard favours the belief that there has been endocarditis also. The persistence up till now of irregular heart action, with occasional doubling of the second sound, argues on the same side. The recurrence of rheumatism suggests recurring endocarditis. But only time—some month or more, with the appearance of further and more definite physical signs, such as blowing or presystolic apex murmur, thrill, and, more than all, change in size and shape—can determine the fact that the heart is permanently crippled.

But in addition to the physical signs observed in this case, of which pericardial friction is the most distinct and significant, a presystolic murmur may come and go, and does not afford absolute proof of heart disease. We have had lately two children, neither of them known to be rheumatic, but both the subjects of marked anæmia. In the elder, a girl of seven, who has just left the hospital recovered, the extreme pallor was readily explained by repeated attacks of hæmatemesis. The spleen was enlarged, and the case resembled one of so called splenic anæmia. At first a single systolic apex murmur was heard, then a presystolic, or, as at times it might be better called, a diastolic mitral as well. And one day, when the child had been some while in hospital and was improving in all respects, a soft, double, pericardial friction sound was heard. This lasted more or less distinctly for some days during the patient's convalescence; she left the hospital free of it, and with a soft presystolic murmur only. The second and more striking example is now before you, A. R——, a boy of five. Anæmia was here extreme and quite unaccounted for. He had never had rheumatism, and there was no splenic enlargement. On the first examination of the blood (Dec. 7th), the proportion of white to red was 47 to 1; hæmoglobin 15 per cent. On the last examination (Feb. 10th), the proportion was 69 to 1: hæmoglobin 40 per cent. This child, too, on admission, had an apex systolic murmur, which afterwards became presystolic, occasional doubling of second sound, uneven rhythm, and a pericardial rub which

went and came and was at times very distinct. If you listen at this moment you will hardly perceive more than a want of strict rhythm, with a suspicion of presystolic murmur. Nevertheless the course of the physical signs, and especially the undoubted friction rub, renders it quite uncertain what the child's heart will show some months hence.

In this last case, if not in the other, the association of anæmia with pericarditis, and probably with endocarditis also, seems best explained by a common origin in the rheumatic state. Anæmia is one of the proper sequels of rheumatism. And when the most profound anæmia is otherwise unaccounted for, it may be permissible to accept the occurrence of pericarditis, notwithstanding the absence of joint pain, as confirming the rheumatic view, and thus to group and interpret symptoms either of which taken by itself is inexplicable. However that may be, the point I would now emphasise is that in these two children with presystolic murmur the physical signs of heart disorder have so far subsided that we hesitate to credit them with heart disease. We might even, I think, go so far as to say that in children there is hardly any heart action or heart murmur which, provided it be new (a provision which excludes blowing murmur, thrill, and marked presystolic or double mitral murmur), indicates for certain irrecoverable disease. Unlike what we observe in the adult, except very rarely, a slight presystolic murmur at apex, diastolic aortic murmur,[1] doubling of the second sound, equally with pericardial graze, will appear and disappear. Their significance is determined by their endurance. Time will serve in some cases to develop additional morbid signs of no doubtful meaning, and in some to restore almost or altogether the heart's natural sounds and rhythm. Acute rheumatism will always disturb the heart. That only is certain. It must be left for the future to say whether such disturbance means permanent damage.

Perhaps the best illustration of the character and course of valve murmurs in childhood—their disappearance in some cases, and in others the gradual development of obvious heart disease—is to be seen in chorea. In fatal cases of this disorder, apart altogether from rheumatism, we get, as a rule, ocular evidence of recent endocarditis which during life has given no certain sign of its presence. On the other hand, in non-fatal chorea in connexion with rheumatism we may watch week by week the gradual transition from soft mitral murmur to physical signs plainly indicative of mitral stenosis. What would be the later steps of the recent endocarditis of non-rheumatic chorea which death, and death only, reveals we cannot tell. But it will not be denied, so far as clinical evidence goes, that the mitral murmur associated with such chorea will often grow by degrees more pronounced, more blowing, and better conducted, until it becomes hard to say whether it may not be evidence sufficient of structural change. Then, and as gradually, with the recovery of the nervous disorder the heart will revert to its normal state. Putting together these facts, the anatomical and the clinical, is it too bold an inference that endocarditis is a common occurrence in chorea, that its proper physical signs are not immediately recognisable, and that the rule of it is, in this association, rheumatism being excluded, to inflict no permanent injury on the heart?

I have yet to show, by the example of a boy, J. W——, ten years and a half old, who has had recurring rheumatism, how obvious and distinct are the physical signs of formed heart disease in children. This boy, who was lately readmitted for dyspnœa fits, had at first, signs precisely similar to these others, and was regarded with the same sort of doubt. He has now, as you can easily see, enlarged heart-thrill, systolic and presystolic murmur. The hand placed on his chest at once perceives all this. The patient is a specimen of what rheumatic carditis comes to. Yet for the while these obvious heart changes are perfectly compensated. The progress of such cases follows one pattern, only the rate varies, and what chiefly accelerates it is adherence of the pericardium. Of this boy's early physical signs, when first he came under notice, one of the worst omens was pericarditis. Later he developed presystolic murmur and apex thrill, the heart enlarged, and doubt was no longer possible as to his physical state. Yet still with evident heart disease he had no dyspnœa, and was hardly different from other boys. And so he might have remained for a long time but for the occurrence of adherent pericardium.

Mitral stenosis in children, then, which is almost always rheumatic, is not at first disabling. I doubt the wisdom of making patients of these young subjects solely for the reason that their hearts are thus changed. The need for early treatment will depend very much on the recurrence or not of rheumatic attacks, and the worst event to be feared in the course of them is pericardial adhesion. Children who keep free from such attacks will go on for a long time without heart trouble. Other children less fortunate will have frequent recurrence of what is really acute rheumatism, though of short duration, with only slight pyrexia and transient joint pains. With these latter the heart deterioration in the way of dilatation is apt to be very rapid, and is indicated by dyspnœa, palpitation, and presently œdema. And there are two physical signs which as these cases progress indicate what the end is to be. One, and the earlier, is the detection from time to time with the successive rheumatic attacks of renewed pericardial friction; the other, and the later, which becomes the more obvious after the rubbing has finally ceased, is rapid enlargement of the heart area, both across and lengthways. Of the origin of this change it does not become us to speak positively in the patient's lifetime. But we know for certain, and can show you in our museum, that the common cause is adherent pericardium.

You will notice that the time usually taken in the full development of post-rheumatic valve disease exceeds the time needed for the child's full recovery from its acute symptoms. The consequence is that in most instances it is only by the accident of a second admission that we get to know the sequel of carditis, whether in permanent damage or gradual recovery. Sometimes, however, as in the child I now show you, the changes are so rapid that we may follow them step by step, almost day by day; and during the short period of a single admission note the transition from abnormal cardiac signs which are changeful and indeterminate to those that afford conclusive evidence of organic disease. The patient in question (L. P——) is nine years and a half old, and on admission had recently had rheumatism. Without entering into particulars of her case, except to say that she gradually improved in general health, it will serve my present purpose to quote a few short entries from the notes referring to the heart signs:—"Jan. 7th (on admission): The apex between the fifth and sixth spaces in the nipple line. Cardiac dulness not enlarged; no thrill. At the apex a soft systolic murmur conducted into the axilla and faintly heard at the angle of the scapula. There is a friction-like rub at the apex, and also to the left of the sternum in the third and fourth spaces.—14th (a week later): The systolic murmur is rather more blowing. Just above the apex and to the left of the sternum is now a second murmur occurring early in the diastolic period, there being a short interval between the second sound and murmur.—19th (twelve days later): The diastolic murmur is only faintly heard. There is now slight rubbing at both apex and base.—21st (fourteen days later): Murmur at apex is blowing. Internal to nipple and along left edge of sternum, after the second sound, is a murmur which, in some revolutions, assumes rather the character of reduplication of the second.—Feb. 3rd (twenty-seven days later): No diastolic murmur is heard, but internal to nipple after the second sound a short sharp bruit not occupying the whole of diastole.—Feb. 8th (thirty-two days later): The bruit noted on Feb. 3rd after second sound has gradually faded, the systolic apex murmur is well heard behind at angle of scapula.—23rd (forty-seven days later): Cardiac dulness now extends to a finger's breadth outside left nipple. The systolic apex murmur is blowing and prolonged and conducted to back. It is immediately followed (or interrupted) by a sharp second sound, succeeding which is a post-diastolic murmur. At the base there is now double aortic murmur, the second sound is audible only over pulmonary area. There is marked thrill." These extracts, taken in their sequence, are characteristic of the mode in which indeterminate physical signs are gradually exchanged for those that are more definite. Systolic apex murmur of very doubtful significance becomes more prolonged and blowing; there comes presently an additional murmur in the diastolic period; friction rub is heard. But at the first none of these signs are constant, and the opinion as to organic disease formed one week may be questioned

[1] Though no example was exhibited at the time of this lecture, I make no doubt that a regurgitant aortic murmur occurring in the course of acute rheumatism may disappear within a short time of its inception, leaving out of account cases where it is difficult to distinguish endocardial murmur from pericardial rub.

the next. Yet, on the whole, the more significant and ill-omened physical signs become more obvious and more persistent, and at last the occurrence of thrill, marked presystolic murmur, and sometimes, as in this instance, signs of aortic disease besides, with perceptible increase in the heart's size, complete the evidence in favour of permanent and extensive lesion. Meanwhile the patient himself is gradually regaining his former health, disturbed by the rheumatic attack, and by the time heart disease is established beyond a doubt he is apparently well.

That is one and a too common ending of acute rheumatism in children as regards the heart. There is also another. Let me, in conclusion, contrast this patient with one just returned from the convalescent home at Highgate. A. C——, aged seven, was shown to you at the last meeting, and had then signs similar to those of L. W——, just mentioned—namely, pericardial rub, reduplicated second sound, alternating with presystolic murmur. On Jan. 15th the note is: "Systolic murmur at apex, soft and blowing and conducted well into axilla; heard also at angle of scapula. To the right, and a little above left nipple, is a loud presystolic murmur. At the second and third spaces, near sternum, friction rub is heard, increased in loudness on pressure." There seemed at this time little to choose between the children as regards their future prospects of heart disease. But now, on careful examination of the two side by side (Feb. 26th), L. W. shows the indubitable signs of extensive heart disease just mentioned, while A. C. has a rhythmical heart, without murmur or any physical signs whatever portending mischief to come.[2] The points which have been discussed and illustrated may be thus stated:—1. Heart disease in childhood, whether functional or organic, is apt to be overlooked and misunderstood. Overlooked because its early signs are often only discoverable by careful physical examination, and misunderstood because such divergence from the normal as in the adult usually implies structure change is in the child often due to temporary disturbance. 2. Owing to the equivocal symptoms of acute rheumatism in children and the indistinct and intermittent character of pericardial rub at that age, the occurrence of pericarditis, which may mean the commencement of heart disease, often escapes notice. 3. The earliest physical signs proper to endocarditis cannot be defined. The heart's sounds and action are invariably modified in acute rheumatism, and while pericarditis almost implies endocarditis, irregular rhythm, systolic apex murmur, doubling of second sound, slight presystolic murmur, will all in their several degrees suggest it; but indubitable signs of material heart change are gradually developed as the result, and not by the mere presence, of endocarditis. 4. The clinical history and morbid anatomy of chorea warrant the belief that mitral systolic murmur, increasing until it becomes slightly blowing, and then decreasing until it disappears, may be due to a form of mitral endocarditis common in chorea, less common in rheumatism, that is recovered from without heart deformity. 5. Mitral stenosis, the common sequel of rheumatic endocarditis, is not at once disabling. The well-being of a child having this defect depends largely on his immunity from subsequent rheumatic attacks, however slight; and what chiefly abridges the period of health he will enjoy is the occurrence of adherent pericardium either in the first or some later attack.

[2] This final examination was made at a ward visit three weeks after the lecture. It is here appended in further confirmation of the text.

REMUNERATION FOR EXTRA MEDICAL SERVICES DURING THE INFLUENZA EPIDEMIC.—The Farnham Board of Guardians have awarded the following sums to their district medical officers for extra services rendered necessary by the recent influenza epidemic. To Messrs. Tanner, Sloman, and Gibson, £10 each, Mr. Manders (Frimley) £6, and Mr. Whiting (Shottermill) £4.

ROYAL LONDON OPHTHALMIC HOSPITAL.—During the past year 1892 in-patients and 25,558 out-patients were treated, and 2126 operations were performed. There was a falling off in the year's income, arising from a decrease in the amount of legacies. The expenditure was £6333, which the committee deemed absolutely necessary to provide for the reception and care of the patients. Additional support was urgent. With reference to the new building, which is to cost £35,000, it was hoped the money would soon be subscribed.

ABSTRACT OF THE

Milroy Lectures

ON THE

PHYSICAL AND MENTAL CONDITION OF SCHOOL CHILDREN.

Delivered at the Royal College of Physicians, London, March 8th, 10th, 15th, and 17th,

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LECTURE II.

THE SIGNS OBSERVED IN DESCRIBING CHILDREN.

"CRANIAL ABNORMALITIES appear to be the most important defects in development; they are the most numerous and have the highest pathological correlation of any sign with 'abnormal nerve signs,' 'low nutrition,' and 'mental dulness.' Boys, 1528; girls, 1048—total, 2576. The size and probable volume of the brain are points of first-class importance, and the size of the cranium is in children a fair indication of the size of the brain. The following standard of the normal in a well-developed child of good potentiality may be given: head circumference at nine months 17·5 in., at twelve months 19 in., at seven years 20 in. to 21 in. This, I believe, to be a high-class standard of the normal, too high if deviations therefrom are to be considered as pathological; after three years of age 19 in. cranial circumference is too small. The figures given indicate the number of cases in which the condition stated was noted among the 50,000 children seen in this inquiry. Boys, 26,884; girls, 23,143. Defects of the cranium may be divided into subclasses. Small heads: Boys, 327; girls, 738—total, 1065. It is seen that in this group, contrary to the usual rule, the defect is more common among girls. If there be no other defect, mental faculty may be average, but the child usually remains thin and delicate. Such cases in after life may undertake good work and do it, but are more liable than others to exhaustion, migraine, and break-down of the nerve system. At school these children are often delicate and irregular in attendance from ailments. Large heads: Boys, 257; girls, 46—total, 303. It seems probable that a large proportion of these cases resulted from rickets at an earlier period, for of the 168 cases of rachitis with defect of cranium, 55·3 per cent. were large heads. Cranial bosses: Boys, 495; girls, 129—total, 624. Cranial bosses are most usual at the site of the ossific centres of the two halves of the frontal bone; they may occur at the sides of the head over the parietal centres and elsewhere, as well as at the site of the anterior fontanelle. Asymmetrical heads: Boys, 84; girls, 16. These did not appear to have marked correlations with defects. [Various other defects of head and forehead were then described.] The palate was ill shapen in 1331 children, standing next to the cranium both in frequency and in a high correlation to defectiveness; the palate was examined in all children. The frequency of the various types has been given, but their relative correlation was not determined; there were twenty-two cases of cleft palate in the 50,000 children. The ears were malproportioned in 1047 boys and 268 girls. [The various forms of defect were described. Among pathological curiosities supernumerary ears, remnants of branchial clefts, congenital absence of ear, &c., were described; the adherent lobe did not appear as a marked defect.] The epicanthis was noted in 898 children. It appeared to have a lower correlation with defectiveness than other signs; when associated with defects of the cranium, however (90 cases), the defectiveness of the group of cases was very marked. Defective growth in the bridge of the nose (455 cases) did not appear to be associated with rickets; the condition appears to be outgrown in many children, and its pathological correlation is not high. Among conditions of the facial tissues notice was taken of cases of 'features large and coarse, 251'; 'palpebral fissures small, 181'; 'mouth small, 44'; 'bridge of nose in its soft tissue redundant, 61.' It is important to note each feature separately, as the defects seem to have different correlative values. The epicanthis was found to a considerable extent local or endemic in certain districts. These defects are often

associated. A hairy forehead, large frontal veins, and a small face under a well-made calvaria were found in some cases. Prognathous type was noted in eleven boys, ichthyosis in seventeen cases, congenital cyanosis in three boys; there were various other minor defects."

Passing on to the description of "abnormal nerve signs," Dr. Warner proceeded to enumerate them, the number found among the 50,000 children, and to give their pathological correlations.

"Expression defective: Boys, 694; girls, 474. This sign has the highest pathological correlation of any nerve sign. The term is here used to connote the general expression of the face, as above and apart from the special muscular balances and action described further on; a good expression may be present with abnormal coarse muscular action. Frontal muscles overacting: Boys, 1322; girls, 1616. Horizontal creases are thus formed; these muscles may often be seen working in athetoid fashion under the skin. The sign may appear in children at any age, and is usually most marked when they are least occupied. Corrugation: Boys, 199; girls, 40. This knitting of the eyebrows may be a 'coarse' or a 'fine' movement; like the last sign, it may be athetoid in character, and the two signs often coexist. Orbicularis oculi relaxed: Boys, 522; girls, 343. The skin of the lower eyelid is relaxed, puffy, and bags forward. The sign often accompanies fatigue and recurrent headaches. Eye movements defective: Boys, 798; girls, 485. The eyes may wander and fix badly, or they may be too immobile, so that the child follows a moving object by turning the head, not by moving the eyes. Nearly half of these children were dull at lessons. Two modes of hand balance were described. In the weak type—715 boys, 504 girls—the wrist and digits fall into moderate flexion; the 'nervous type'—550 boys, 516 girls—presents flexion of the wrist with over-extension of the digits. The former type is common in weak children, the latter in those who are irritable, nervous, over-mobile. The percentage correlations are for the 'weak hand' defects in development 47, low nutrition 18, mental dulness 38; for the 'nervous hand' defects in development 43, low nutrition 25, mental dulness 33. Finger twitches: Boys, 445; girls, 261. This condition, though more common in boys, passes on to chorea more frequently in girls. Lordosis: Boys, 184; girls, 279. The lumbar spine is markedly arched forward when the hands are held out in these cases. Head balance asymmetrical: Boys, 219; girls, 319. The percentage correlation of this sign is high; defect in development 61, low nutrition 29, dull 45. Among the less frequent abnormal nerve-signs were described 'general defective balance,' 'defective response in action,' 'speech defective,' 'mouth open,' 'grinning,' 'nystagmus,' 'ptosis,' 'tremor'; these minor groups included 668 children."

REMARKS ON PNEUMONIA AS A CAUSE OF DEATH IN ASYLUMS:

WITH AN ACCOUNT OF A SERIES OF CASES WHICH OCCURRED IN THE CARLISLE ASYLUM IN 1888.

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THE average death-rate from pneumonia taken for a period of five years from the Registrar-General's returns for England is 6·1 per cent. of the total deaths. Pneumonia in 1890 caused 7·1 per cent. of the total deaths, but this year is probably an exceptional one from the prevalence of influenza and sequent pneumonia. An average of five years should, and probably does, give a fair idea of the proportion in which pneumonia stands to other causes of death. Considering the care which is expended on lunatics in public asylums, at the first glance one would say it was unlikely that the average percentage of deaths from pneumonia would be as high in asylums as the total of returns show it in England. For my own part, until I looked into the matter I was ignorant on the subject, as I have never seen it touched on in any medical book or paper. If the Commissioners in Lunacy were to adopt the table of the Psychological Association, giving the causes of death and the age at death, it would add greatly to the value of their returns. Had it been in use I could easily have ascertained the proportion of deaths from pneumonia in asylums. The Scotch commissioners in their table of deaths adopt a classification based on the Psychological Association table; but as they group all pulmonary diseases except phthisis it is valueless for any inquiry into a special lung disease with that exception. Now that post-mortem examinations are the rule in asylums it would be of great advantage if the lunacy boards in England and Scotland would introduce into their reports death tables drawn up in such form as to give the information contained in the table of deaths of most asylum reports, and the Irish Lunacy Board would do well to begin life anew with their fresh inspectors, and issue a series of tables, which would be of some value, unlike those hitherto in use.

As I was unable to get, as one should, the information from one source, I set about collecting statistics to give me a fair average of the death-rate of pneumonia in asylums in the following manner. I took the total deaths for 1890 in ten Scotch asylums, in twenty-six English county asylums, and in eight English borough asylums; they numbered 3065, while the deaths from pneumonia numbered 250 (8·1 per cent.). I took the total deaths for 1889 in ten Scotch asylums, twenty-seven English county asylums, and ten English borough asylums: they numbered 3607, while the deaths from pneumonia numbered 194 (5·3 per cent.). I also took the total deaths and deaths from pneumonia during 1887 in twelve Scotch asylums, thirty English county asylums, and eight English borough asylums. The total deaths numbered 3402—220 deaths from pneumonia, or 6·4 per cent. of the total deaths. As there seemed a considerable disparity in the percentage of deaths in these years I pursued the inquiry further. I took a ten years' period of seventeen asylums and worked out the individual percentages of the deaths from pneumonia in each instance. I give the table here, as it may be of use, perhaps, even to the medical officers of some of the asylums where the death-rate from pneumonia is high; they may be able to ascertain some special cause, and guard against it in the future:—

TABLE I.

Showing the total Deaths and Deaths from Pneumonia, with Percentages for Ten Years ending 1890, in Seventeen Asylums.

Name of asylum.	Total deaths.	Total deaths from pneumonia.	Percentage of deaths from pneumonia.
Hants	932	15	1·6
Beds, Herts, and Hunts	934	41	4·3
Stafford	915	48	5·2
Leicester	448	35	7·8
Glamorgan	762	54	6·9
Abergavenny	604	47	7·7
Beverly	289	6	2·3
Chester	641	42	6·5
Rainhill	1054	68	6·4
Lancaster	1469	122	8·3
Whittingham	1415	117	8·2
Carlisle	490	30	6·3
Newcastle	285	29	10·1
Northumberland	341	38	11·1
Edinburgh Royal	765	30	5·0
Glasgow Royal	334	23	6·8
Fife and Kinross	279	24	8·6
Totals	11,932	777	6·5

A glance at this will show the vast disparity which exists in the cause of death by one disease in different asylums; and geographical position doubtless accounts for it. I know few asylums situated in more cold localities than the Newcastle and Morpeth asylums, and there the death-rate from pneumonia is singularly high, while it is extraordinarily low at Hants. I do not see why it should be so high at Whittingham and Lancaster. I think it will be quite conceded by all that exposure to cold is one of the most common causes of pneumonia, although no doubt other causes, some of which at present we are ignorant of, contribute in the production of this disease. I then massed the total deaths of the three years and the totals of the seventeen asylums. They amounted to 22,006, of which 1441 were from pneumonia—a percentage of 6·5. This, considering the large number of deaths taken, should be a fair percentage. It is 0·5 above the death-rate for five years from pneumonia in England, and it points strongly to the conclusion that as a cause of death pneumonia figures too highly in asylums, and it might be well for all who have to do with insane patients to look if possible into the causes of their pneumonias. When I deal with the period of the year at which pneumonia is most rife, I shall have only my own experience

to go on, as I cannot without vast trouble to others get such information. Is pneumonia caused by exposure in cold weather in working parties of dements of feeble circulation who frequently are allowed to sit thinking of nothing when they should be on the move? Do patients after a warm bath on bathing nights go to bed as they should in all asylums, or in some do they go from the warm bath to their usual avocations? I analysed the deaths from pneumonia in the ten asylums, and found that in seven instances the deaths were proportionately higher among the men than the women; and on taking the total of these ten asylums I found the male deaths from pneumonia preponderated. This is also the case at Garlands. It is what one would expect, for as a rule, even in asylums, men are more exposed from out-door occupations to the climatic causes which give rise to this disease. Outbreaks of pneumonia have not been unknown in asylums, as one may perceive from asylum death tables. When they occur the superintendent should allude to them in his report, and where possible give his solution of their cause, if he does not report them in a medical paper, for whatever can throw more light on this subject is desirable from a scientific point of view. In the report for 1887 of the Montrose Asylum, Dr. Howden fully reports a series of cases which occurred there in March and April of 1887; eleven cases of pneumonia, two of pleuro-pneumonia, one of bronchitis, and one of pleurisy during March; and one of pleurisy, two of pneumonia, and one of pleuro-pneumonia during April; also twenty-one cases of acute lung disease, with twelve deaths, between March 20th and April 16th. He gives the mean temperature during March and April, which was low, and says, "There can be little doubt, however, that the sudden cold, added to some unknown condition, was an important factor in the production of lung disease." The following sentence occurs in the report of one of the Visiting Commissioners, dated July, 1886: "It must be recognised, in spite of so much that is gratifying in the condition of the asylum, that it is still more crowded than it ought to be." Is this the "unknown condition" mentioned by Dr. Howden? I believe vitiated air proves a very important factor in the causation of pneumonia—or, more correctly speaking, the transition from vitiated air to cold. Many people can tell with accuracy that their attack was originated by coming out into the cold air from a crowded meeting or close church; and not long ago two well-known members of Parliament took pneumonia, which proved very rapidly fatal, from walking home on a cold night from a crowded house. During the thirty years the Carlisle Asylum has been opened only 41 deaths from pneumonia have occurred—3·8 per cent. of the total deaths. During the first fifteen years of its existence only nine deaths occurred from this cause—7 men and 2 women (2·6 per cent. of the total deaths). During the fifteen years ending 1891 32 deaths, 19 men and 13 women (4·2 per cent.). In Table I. the Carlisle percentage of deaths from pneumonia is shown for the ten years ending 1890 as 6·3, but this rate is greatly caused by the results of one year, and it is the outbreak of this year that I now propose to deal with. I show in Table II. the number who died, as well as the number who were under treatment for pneumonia at the Carlisle Asylum during fifteen years ending 1891:—

TABLE II.

Showing Deaths from Pneumonia and those under Treatment for Fifteen Years ending 1891.

Year.	Deaths from pneumonia.			Under treatment for pneumonia.		
	Male.	Female.	Total.	Male.	Female.	Total.
1877	0	0	0	0	1	1
1878	0	0	0	0	1	1
1879	1	0	1	4	1	5
1880	0	1	1	3	1	4
1881	2	1	3	7	4	11
1882	1	0	1	1	3	4
1883	2	3	5	2	6	8
1884	2	3	5	9	6	15
1885	3	0	3	4	1	5
1886	0	1	1	2	2	4
1887	0	1	1	2	1	3
1888	7	1	8	14	5	19
1889	1	1	2	4	2	6
1890	0	0	0	2	0	2
1891	0	1	1	0	2	2
15 Years' Totals ..	19	13	32	54	36	90

An examination of this table will show that more men were affected by pneumonia, and also died of it, than women, and that an unusual proportion of deaths took place from it in 1888, and an unusual number of patients were affected by it. Fourteen of the nineteen who were affected by the disease were so between April 22nd and July 24th. Now, June and July are not common months to see pneumonia in at all. In ordinary experience one sets down pneumonia as occurring most in January, February, March, and April. I worked out all my cases for fifteen years, and, excluding this exceptional year, I found them stand thus: In January, 9; February, 5; March, 13; April, 11; May, 6; June, 3; July, 1; August, 2; September, 5; October, 3; November, 7; December, 5. In March and April they were most frequent, and next January and November. I think most practitioners will bear me out when I say that this is very much what is seen in practice outside of asylums.

TABLE III.

Direction of wind the day before and day of onset, with dates.	Showing portions of lung affected, with result.
1888.	
Jan. 7th, W.; 8th, S.W.	T. F., male, 71 years; epileptic dementia. Death after 7 days. Posterior portions of right lung in a state of red hepatisation.
March 7th, S.W.; 8th, S.E.	E. T., female, 70 years; melancholia. Death after 7 days. Upper lobes of right lung in a state of red hepatisation.
March 11th.	J. B., male, aged 35; mania. Left base affected. Recovered. Came in with pneumonia present.
April 21st, N.E.; 22nd, N.E.	M. E. J., female, 35 years; dementia. Base of left lung affected. Recovered.
April 30th, S.E.; May 1st, S.S.E.	T. B., male, aged 48; general paralytic. Right lung affected. Death after 6 days. Upper lobes of right lung in a state of red hepatisation.
May 11th, S.; 12th, calm; 13th, W.	G. G., male, aged 53; dementia. Right base affected. Recovered.
May 16th, S.E.; 17th, S.; 18th, S.E.; 19th, S.E.; 20th, W.S.W.; 21st, S.W.	J. B., female, aged 40; mania. Both bases affected. Recovered.
June 5th, S.E.; 6th, S.E.	G. M., male, aged 34; dementia. Left lung affected. Death in 6 days. Left lung throughout in a state of grey hepatisation.
June 6th, S.E.	J. F., male, aged 42; mania. Left base affected. Recovered.
June 7th, S.E.	J. G., male, aged 68; melancholia. Left lung affected. Died in 5 days. Left lung almost entirely solid, passing from red to grey hepatisation.
June 12th, S.E.; 13th, S.	T. H., male, aged 54; mania. Died in 6 days. Whole of left lung and base of right lung in a state of grey hepatisation.
June 19th, N.N.W.; 20th, N.E.	T. H., male, aged 28; dementia. Died in 5 days. Upper portions of right lung in a state of red, lower of grey hepatisation. Base of left lung in a state of grey hepatisation.
June 26th, calm; 27th, S.E.	M. N. W., male, aged 49; dementia. Both bases affected. Recovered.
June 28th, calm.	Rd. S., male, aged 54; mania. Right base affected. Recovered.
June 29th, calm.	R. R., male, aged 57; dementia. Died in 5 days. Upper portion of right lung in a state of red, lower in a state of grey hepatisation, and base of left lung in a state of grey hepatisation.
June 30th, N.E.; July 1st, N.E.; 2nd, S.S.E.; 3rd, W.; 4th, W.	P. L., male, aged 40; dementia. Left base affected. Recovered.
July 18th, E.; 19th, E.; 20th, E.; 21st, S.; 22nd, S.E.; 23rd, S.; 24th, calm.	S. T., male, aged 48; mania. Died in 6 days. Right lung throughout in a state of red hepatisation, also base of left lung.
Nov. 5th, E.; 6th, S.E.	B. M., female, aged 26; imbecile. Base of left lung affected. Recovered.
Nov. 10th, S.E.; 11th, S.S.E.	J. O. C., female, aged 75; dementia. Base of right lung affected. Recovered.

Summary of TABLE III.

14 males and 5 females affected.
Right lung implicated in 6 cases.
Left " " " 7 "
Both " " " 6 "

I now deal with the outbreak of pneumonia which occurred at Garlands Asylum. Table III. shows the number of patients who had pneumonia and who died of it in 1888, with the date of onset of disease, and the direction of the wind on that day and the day before. I at first attributed this outbreak to the east wind, which that year was more persistent than usual; but I subsequently came to the conclusion that another factor might, and probably did, play an important part in originating the disease. In dealing with this outbreak I exclude the cases which occurred in January, March, and November. They, I believe, were due to ordinary climatic causes. One of the patients got a chill by being brought from her ward to see her clergyman, as it was getting dark on a cold night in March, with a bitter east wind blowing. She complained almost at once, and next morning had the physical signs of pneumonia. The old farmstead of Garlands, with piggeries attached—which had existed from time immemorial, and since the opening of the asylum had been fully inhabited, containing usually from seventy to a hundred pigs, besides horses and cows—was pulled down, and its foundations rooted up, between the middle of April and the end of July, 1888. The farmstead was situated due east of the centre main door of the asylum, at sixty-six yards' distance from it, but it was within twenty yards of a portion of the men's ward, where eighty men lived. The construction of the total asylum is such that any wind, except west, might blow floating rotten débris from the in-course-of-being-razed steading into some portion of the asylum, and where buildings project swirls of wind often are seen to be diverted, and carry floating objects even in directions which the usual course of the wind would not but for artificial obstruction. Now,[1] from April 21st to July 24th inclusive, ninety-four days, wind west, or with west in it, only blew thirty days. Calm days only amounted to nine; on the other fifty-five days the wind blew on some portion of the buildings from this steading. The mean temperature for May was 0·01° above the usual average, but for June it was 1·6° below it, and 2·7° for July. The mean temperature for May was 48·5°, for June 52·8°, for July 53·8°. Of the fourteen patients who had pneumonia between April 21st and July 24th 12 were males, 2 females, and of the 12 males 8 were employed in demolishing the old buildings, 3 lived in the most contiguous building to the work, and the other lived in a building opposite to it. I am aware that it may be said, If you think the floating débris was the primary cause of this outbreak, why did it not affect more of the people engaged at work? and how was it that none of the attendants were implicated? It is exceedingly rare that an outbreak of any disease attacks all who are in its vicinity. Some individuals are less susceptible to diseases than others. As a rule, people who work with dusty material do so on the wind side. Many of those who were at work might have had the sense to do this, and though close to the source of evil have been all the safer from this proximity. It is usually dements of low circulation, depressed nerve condition, and generally low vitality, who in asylums suffer first, and most seriously, from deleterious surroundings or exposures. I strongly suspect, and I think with reasonable grounds, that the razing of this old and foul building, which never should have been permitted to exist in such propinquity to the asylum, had an intimate relation to the outbreak of pneumonia I record. Though I am aware that one, if not more, recorded outbreaks of pneumonia have been ascribed to similar causes as this I mention, I purposely abstain from attempting to quote references on the subject, as my not having easy access to a medical library would prevent my doing so exhaustively.

I believe congestion of the lungs, which otherwise might go on to pneumonia, may be arrested by prompt treatment. The following was a well-marked case: A. H——, aged fifty-five, an M.R.C.S., told me on the morning of Dec 19th, 1886, that he had a rigor the previous night, and that he believed he was in for pneumonia. He had the signs of acute congestion of one lung. Temperature 103°; pulse 114 I gave him a bath of from 110° to 114°, put him to bed with much extra covering, made him swallow a stiff tumblerful of hot toddy and a good dose of Dover's powder, and put a large mustard poultice on his chest. He perspired profusely. His temperature quickly fell, but rose at night to 102·4°, but next day was normal, and he seemed well. I adopted the same treatment in several cases with success, and in a good many without success. In cases of very high temperature in pneumonia I have used antipyrin. I do not consider the treatment by forced reduction of temperature conducive to recovery. Pleuritic effusion is not often seen in this asylum. Aspiration has only twice been required in the last fifteen years: once in the case of an attendant whose chest had subsequently to be drained for empyema sequent to influenza; the other occasion, a patient whose one side of chest was full, containing 75 oz.; he was a stupid dement. His illness was not noticed at first. That pleuritic effusions are not common in most asylums is probably owing to early treatment and warmth.

I think I am warranted in summing up the contents of the foregoing as follows:—(1) That the percentage of deaths from pneumonia is higher in asylums than among the general public, and in asylums the male sex are most liable to it; (2) that this should not be the case, considering the amount of care and money which are expended on lunatics; (3) that the geographical position of some asylums, with the accompanying lowering of temperature, accounts for a high percentage of pneumonia in them; (4) that a high death-rate from pneumonia seems to occur in some asylums which are not situated in cold regions, and that inquiry should be made into the causes; (5) that various causes predispose to and originate pneumonia, and where exceptional outbreaks appear thorough investigation should be made, probable causes should be ascertained, and the matter should be carefully recorded; (6) that an exceptional outbreak of pneumonia took place at the Carlisle Asylum during April, May, June, and July, 1888; (7) that the period of the year at which this outbreak took place pointed to some special or exceptional cause, as January, February, and March are the most usual months to see pneumonia in; (8) that this outbreak chiefly affected the male patients, and was synchronous with the razing of an old farmstead which was contiguous to the male division; (9) that eight of the patients affected were employed at work in demolishing the buildings, and three resided in the buildings next the work, and the wind blew from such directions during the period of the attack as to justify the belief that inhaled débris might be the principal factor in the production of the disease; (10) that the number of cases of pneumonia at Carlisle Asylum is usually not high year by year, the percentage of deaths from it to other causes being only 3·8 over a period of thirty years,—this, almost more than any other circumstance, points to a special and exceptional cause for the outbreak.

Carlisle.

[1] For the direction of the wind and mean temperature I have to thank T. G. Benn, Esq., of Newton Reigny Observatory, who always most kindly puts his observations at my disposal for such purposes as this.

A SUCCESSFUL CASE OF LAPAROTOMY FOR A SUPPURATING HYDATID CYST OF THE LIVER.

BY ALEX. G. R. FOULERTON, L.R.C.P. LOND., M.R.C.S.

IN this paper it is proposed to give some short notes about a case of suppurating hydatid cyst of the liver on which I lately operated. The patient, Michael B——, aged fifty-five, came under my care in St. Bartholomew's Hospital at Chatham, on July 18th of last year, having then been in the hospital three days. He had been a soldier; ten years of his foreign service had been passed in Malta and Gibraltar, and the last twelve months in Bermuda, just sixteen years ago. He described himself as having been a healthy man, and up to quite lately had been subject to no illness worth speaking of. But about two months ago he began to feel unwell. During these two months he had been constantly conscious of some slight tenderness on pressure over the right hepatic region. Three weeks before admission his skin suddenly became yellow, and at the same time his urine was of a dark-brown colour. This attack of jaundice seems to have been transient, lasting but four days. When I first saw the man his general appearance was good; no sign of jaundice was noticeable. He had really nothing much to complain of except the slight tenderness already mentioned, and a certain feeling of lassitude and weakness. His principal excretions were

natural. The upper margin of liver dulness was normal as to its level; the lower margin descended lower than usual, reaching in the middle line to just above the umbilicus. Towards the left the region of dulness extended as far out as the nipple line. Neither the margin of the liver nor any definite tumour could be marked out by palpation. The subcutaneous veins of the right side of the chest below the nipple were considerably engorged. The earlier readings of the temperature chart were as follows:—

	Morning.	Evening.		Morning.	Evening.
July 15th ...	97·6°	99·6°	July 19th ...	98·0°	98·4°
,, 16th ...	97·4°	100·6°	,, 20th ...	98·4°	98·8°
,, 17th ...	97·4°	98·4°	,, 21st ...	98·2°	99·0°
,, 18th ...	97·4°	98·4°	,, 22nd ...	98·4°	99·2°

Then, on the morning of July 23rd, it was seen that a considerable fulness had developed, and it seemed quite suddenly, in the epigastric region. The lower margin of this swelling, which was obvious to the touch, corresponded fairly accurately with the lower margin of dulness already mapped out by percussion. The recti muscles moved freely over the surface of the swelling which was clearly not adherent to the abdominal walls, rising and falling with respiration. The pulsation of the aorta was transmitted very distinctly through the tumour, in which no bruit could be heard or any expansile pulsation detected. The swelling gave a certain sense of elasticity to the touch, but definite fluctuation was not to be obtained. During the next week nothing was done. The man remained in excellent condition; his only complaint was against confinement to his bed. The swelling increased very slightly, if at all, in bulk. The temperature was somewhat irregular.

	Morning.	Evening.		Morning.	Evening.
July 23rd ...	98·0°	100·4°	July 27th ...	97·8°	100·0°
,, 24th ...	98·8°	98·0°	,, 28th ...	98·0°	99·2°
,, 25th ...	98·4°	98·6°	,, 29th ...	98·0°	100·6°
,, 26th ...	98·6°	100·0°	,, 30th ...	98·6°	99·4°

On July 30th the patient did not feel quite so well as he hitherto had felt. He had occasional pain, described as griping, in the region occupied by the swelling. His tongue was coated, and he was inclined to vomit.

July 31st: Patient remained in much the same condition. In the evening he had a rigor, followed by profuse sweating. Morning temperature 98·4°, evening 100·4°. — Aug. 1st: The man was better again, the feeling of nausea had left him. Morning temperature 98·4°, evening 101·6°. — 2nd: Condition of things remained unaltered. An exploring syringe introduced into the more prominent part of the swelling and in the middle line struck pus at a depth of about two inches. Morning temperature 98°, evening 99·8°.—3rd: Chloroform having been administered I made an incision about three inches and a half in length along the middle line, the ends of the wound being at an equal distance from the sterno-xiphoid joint and the umbilicus respectively. The peritoneum having been reached, was opened by an incision of similar length. The surface of the liver, natural in appearance, presented at the opening; it was free from any adhesion to the abdominal wall. The lower margin of the liver was examined by the finger, and the gall-bladder felt slightly distended, but the surface presented by the gland was so much increased that a thorough examination was impossible with an opening of the size made. Three or four exploratory punctures with a hollow needle from the middle line towards the right proved unsatisfactory. But the first puncture towards the left reached pus. Some attempt was now made to attach the liver to the margin of the peritoneal wound by sutures. But this attempt, as might perhaps have been foreseen, resulted in failure, the sutures cutting through the gland and its capsule very readily. The liver was then steadied as much as possible by external pressure, and a pair of dressing forceps were thrust into its substance along the hollow needle, as a guide. As some pus oozed up the blades of the forceps were separated and quickly withdrawn. A rent, about two inches long, in the liver substance was the result, and through this there was a large gush of sweet thickish pus, containing numerous daughter cysts. Whilst the forceps were being withdrawn the two forefingers were passed into the pus-containing cavity, and thus the margins of the opening in the liver were hooked close to the abdominal walls. The flow of pus having ceased, it was ascertained that the opening led through rather more than half an inch of liver substance into a cavity, the walls of which, so far as they could be explored, were lined with soft gelatinous material. Five deep sutures of stout silk were then passed by means of a large strongly-curved needle from within the cyst through the liver and overlying abdominal walls. These being firmly tied shut out the peritoneal cavity effectually, leaving a gaping wound which readily admitted two fingers and led directly into the cyst cavity. These sutures, it may be mentioned, did not appear to cut through the liver substance as the superficial ones had done, probably because the cyst wall below and the abdominal wall above presented a sufficient resistance to their cutting action. The interior of the cyst wall, wherever it could be reached, was rapidly scraped with the finger-nail and washed out repeatedly with warm water. When this water returned quite clear about a drachm of iodoform was introduced into the cavity and a pad of absorbent wool applied over the wound. The patient, after the evacuation of the large volume of pus, had become collapsed in the extreme, but rallied quickly when he was put back into bed. Morning temperature 99°, evening 99·6°.—4th: The patient had passed a good night and was comfortable in the morning. The pad having become soaked with sweet blood-stained discharge the wound was dressed. The cavity of the cyst had contracted considerably and its walls could be examined everywhere with the finger introduced through the wound. The walls were also becoming everted at the margins of the opening. The cyst was washed out with tincture of iodine and warm water (half an ounce to the pint), a small quantity of iodoform introduced, and a fresh pad of the absorbent wool applied. Morning temperature 98·6°, evening 99°.—5th: The patient was doing very well; the amount of discharge on dressings was much less. The cyst was washed out and treated as before. Morning temperature 99°, evening 99·4°.—6th: Morning temperature 98·8°. The patient was doing well in every way. Very slight amount of discharge. The continued eversion of the cyst had produced a granular mass around the opening. Wound dressed as before.

On this last date I left Chatham, and cannot give any detailed notes of the further progress of the case. I have since learned, however, that this progress was satisfactory. The sutures were removed, and the patient ordered up on August 11th. Recovery was uninterrupted, save that the patient suffered from a typical attack of ague one afternoon when he was up and about. He had not suffered from ague before, so this attack was probably incidental to his stay in the hospital, which is situated in a distinctly malarial district where such attacks are common enough. The wound had healed up, and the man appeared to be quite cured when he left the hospital shortly afterwards. The case has been reported because operations for suppurating hydatid disease are not of very frequent occurrence in this country, and when they do occur the termination is not always satisfactory. But after the bare notes have been given there is not much more to be said in the way of comment. The cyst must have been connected with the under-surface of the left lobe of the liver, which was more or less flattened out on its surface. Its size was doubtless considerable, judging by the large quantity of pus which escaped. The rapidity of its contraction and subsequent spontaneous eversion must be attributed chiefly to the normal intra-abdominal pressure and the presence of an opening of fair size. Eversion at the time of operation, a procedure which has sometimes been recommended, was not judged to be expedient, partly because of its seeming difficulty in this particular case, partly because of the collapsed condition of the patient. And if it had been performed I do not think that the cure would have been better or more rapidly accomplished. From the wounded liver substance there was little or no haemorrhage. Why this was I am unable to say. From what one has seen of other wounds of this organ the opposite might have been anticipated. More than half an inch of the gland substance was penetrated, but the tissue might possibly have been rendered less vascular by the pressure to which it had previously been subjected. The sudden swelling which appeared at the epigastrium on July 23rd, caused either by some sudden alteration of the position of the cyst, or by some sudden increase in its size, is also difficult of exact explanation.

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ON A FORM OF PAINFUL TOE.

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THE intense suffering caused by this complaint, and the prompt and certain relief which may be obtained by suitable yet simple treatment, lead me to record my own experience of a special form of painful toe. Both in symptoms and pathology the complaint is identical with that to which Dr. Auguste Pollosson, in 1889,[1] gave the name "anterior metatarsalgia." Only in the latter the metatarso-phalangeal joints are affected, whilst in the former the distal phalangeal joints are alone involved. In order to avoid a more cumbrous designation I have called the former affection "a form of painful toe." In either case, under the influence of prolonged standing or walking in tight boots, the ligaments of one or more joints, metatarso-phalangeal or phalangeal only, become strained, slight subluxation takes place, the nerves are stretched and pressed upon by the partially dislocated bones, and the characteristic pain is produced. The pain occurs suddenly, and with a sense of something giving way at the site of the joint affected. It is relieved by taking off the boot and gently pressing the displaced bones into proper position. The reduction is always accompanied by a sharp twinge of pain, followed by instantaneous relief. I have only met with one case of the major affection. It was that of a tramcar conductor, who suddenly developed the symptoms, and had suffered from them for three months. The pain was under the head of the third metatarsal bone, and he could relieve it by taking off his boot, flexing his toes whilst pressing gently with his finger on the site of the pain. His occupation prevented him from carrying out this treatment as often as he desired, so I directed him to wear a boot with a very broad sole, slightly convex on the upper surface, so as to support the sunken head of the third metatarsal bone, and with plenty of room across the base of all the toes. This treatment proved thoroughly satisfactory. The following are cases of the minor but similar affection—painful toe.

CASE 1.—In the autumn of 1883, after a long day on duty as hospital dresser, I walked through the wet streets to the opera. The theatre was crowded, and I had to stand throughout the performance. Towards the close I suddenly felt most severe shooting and burning pain in the fourth toe of my left foot. The boring of a hot iron into the flesh might have caused similar pain. It extended up the nerves of the outer side of the foot and leg into the sciatic, with a numbing, sickening sensation. I limped home, with dismal misgivings lest I had fallen a premature victim to gout; but on taking off my boot I discovered that the last phalanx of the fourth toe was over-extended, whilst the head of the second phalanx was slightly displaced downwards. Reduction caused a sharp twinge of pain, followed by immediate relief. From this time for many months I was constantly liable to these attacks of pain, especially in hot, damp days, after standing or walking for any length of time. I learned to reduce the dislocation and obtain relief by treading heavily on the empty part of the toe of my left boot with the heel of my right, and then forcibly drawing the left foot back within the boot, at the same time elevating the toes against the "uppers." Both the displacement and the reduction were accompanied by a distinct click. This manœuvre became necessary with more and more frequency, and the pain increased in severity until I had serious thoughts of having the toe amputated or the joint resected. At last, with the happy inspiration of Mark Twain's hero, who after twenty years' confinement opened his cell door and walked out, I discovered an equally easy means of escape. My boot, though quite comfortable when first put on, became too tight across the toes as soon as the foot became at all congested. Under this condition the last phalanges became jammed and fixed together, whilst the relaxed ligaments of the second joint of the fourth toe allowed the head of the second phalanx to drop and press painfully upon the nerves. I ordered a boot with plenty of room for lateral expansion of the toes, and I was at once freed from the attacks of pain which made my life a burden.

CASE 2.—A gentleman recently consulted me on what he believed to be a soft corn between the fourth and little toe of the right foot. On examination I could find no trace of the soft corn, but infantile paralysis had left his foot with slight talipes varus and marked pes cavus. The great toe was hyper-extended and pointed outwards at an acute angle from the metatarsal joint. The rest of the toes were crushed together in the form of a cone; the fourth toe was laterally flexed, and almost hidden beneath the third. The calf muscles were wasted, and the limb was nearly three-quarters of an inch shorter than the other. To counteract the shortening he had worn for many years an extra three-quarter-inch heel inside his boot. The sole was not similarly raised, so he was compelled to walk in a downward plane, forcing his toes together at each step into his somewhat pointed and short boot. He suffered no inconvenience from these deformities until the beginning of the year 1891, when he acquired the habit of walking on the outside of his foot, bearing especially on the outer side of the little toe, in order to avoid resting his full weight on the ball of the great toe, which was unduly prominent and tender. In July, 1891, during a long walk, he was suddenly attacked by acute pain in the little toe. The sensation, he said, was as if a hot fusee were placed between his toes, and were burning slowly outwards through the little toe. From that time until I saw him three months later, he had been constantly subject to these attacks of excruciating pain, and they had so increased in frequency and severity that he said he would have his toe amputated at once if he could not otherwise obtain speedy relief. He could wear a loose slipper with comfort, but on walking in a boot for even a few yards the pain occurred. It was not relieved by taking off the boot, but he showed me how, on gently pressing the tip of the little toe outwards, the pain instantaneously ceased, the manœuvre being accompanied by an extra sharp twinge of pain. Obviously his suffering was due to slight inward displacement of the last phalanx of his little toe, and consequent stretching and compression of the nerves between the displaced bone and the adjoining toe. The treatment in this case was not so simple as in my own, owing to the various deformities of his foot. But to make the story short, complete relief was obtained by a boot contrived on the following principles: Plenty of room was given across the toes, the little toe being especially relieved of all pressure. The outer side of the fore part of the sole was raised, and the heel lowered, so as to throw his weight from the outer to the inner side of the boot, and to prevent forcing of the toes together. A graduated depression was made beneath the ball of the great toe, in order to avoid walking on the downwardly displaced head of his first metatarsal bone.

Remarks.—These cases form additional links in the chain of evils attendant on wearing boots too tight across the toes. Patients will be probably loth to admit that a form of boot to which they have always been accustomed, and which they have regarded as both comfortable and elegant, can be the cause of their sudden attacks of pain. And the latter they will readily attribute to gout or rheumatism; for to the non-professional public, pain in a toe means gout, and pain elsewhere in a limb means rheumatism. Not only do the paroxysms of pain strongly resemble those of gout, but it is possible that the strained and unnatural position into which many force their great toes may account for the prevalence with which those parts become the primary seat of true gout.

Upper George-street, Bryanston-square, W.

[1] THE LANCET, March 2nd, 16th, and April 6th, 1889.

ACUTE OTITIS; CEREBRAL ABSCESS; OPERATION, AND DEATH.

BY W. K. HATCH, M.B.,
SURGEON-MAJOR, BOMBAY ARMY.

THE following case, terminating in cerebral abscess, was under the observation of a careful practitioner from its commencement up to its termination by death after operation. The patient, a man aged twenty-seven years, resided in rather a low-lying part of Bombay, and was in fair circumstances. Up to the present illness he had enjoyed good health. He was attacked by acute inflammation of the right

ear on March 19th, 1890, followed a week later by similar inflammation of the left. Both drums were much congested, and severe pain, with deafness, was complained of. Ultimately rupture of both membranes took place; and when I first saw him, on April 25th, there was a large perforation in each, with considerable congestion of the drums and meatus; there was a very profuse discharge from both ears, and a good deal of deafness. By May 23rd the discharge had entirely ceased, and soon afterwards hearing on the left side became normal, but the patient continued to be very deaf in the right ear; the perforations had completely healed, and the appearance of both tympanic membranes was nearly normal; some congestion, however, remained present. Curiously enough, the patient's wife on April 27th of the same year was also attacked by acute inflammation of both ears, which ended by perforation and discharge of pus. Subsequently the discharge stopped, and hearing was perfectly restored. No further symptoms were noticed up to July 20th in the husband, he having meanwhile returned to his work in an office and being apparently in good health, although he had certainly lost flesh and colour since his illness. He now began to complain of neuralgic pains about the right half of the head, particularly in the supra-orbital region and the side of the neck. The pains continued for about ten days, and then slowly disappeared; the left side of the head was then affected in a similar manner. About the middle of August the pains on the right side reappeared, but could not be in any way localised; the neck was said to be painful but not at all tender. Tonics were given and anodyne applications to the head and neck were used; they gave temporary relief. Being suspicious of the formation of an abscess we carefully examined the patient, but nothing definite except loss of flesh could be made out. On Sept. 5th, for the first time, the pain was said to be more confined to the back of the head, somewhere about the posterior inferior angle of the right parietal bone. The paroxysms of pain came on at various times during the twenty-four hours, and were very severe in character, necessitating the frequent injection of morphia, which had a very good temporary effect; if not immediately injected the patient became wretched in the extreme, begging for the morphia, and quite unable to bear the sharp pain which he felt shooting down the neck and back of the head. On Sept. 10th we again saw the patient, and I felt convinced that there was an abscess somewhere in the brain, but could not localise it. There was and had been no fever, but the severe pain, inability of the patient to do any work, and the fact that he seemed rather stupid and slow in answering, were very suspicious symptoms. As the patient was of a sallow complexion naturally, it was difficult to say whether there was or was not any change in his appearance. The pulse was feeble and slow, and he suffered from dyspeptic symptoms, constipation, and loss of flesh. The eyes were normal. I accordingly recommended an exploratory operation, but the relatives would not hear of it. The patient continued in this state, suffering severe pain and becoming almost frantic and uncontrollable if not at once injected with morphia, so that his medical attendant was constantly being sent for both night and day. On Sept. 18th the patient became delirious and remained so until the 20th, when I again saw him, with Brigade Surgeon W. Gray, who agreed with me that immediate operation was necessary. Arrangements were completed for its performance that day, when, a little before the appointed hour, the patient became suddenly conscious and intelligent; the relatives, therefore, would not permit the operation to be performed. He now stated that he felt pain behind the right ear and tenderness on percussion over the temporal bone. The severe neck pains still, however, continued. There was no paralysis of any muscles discoverable, and the appearance of the membrana tympani was unaltered. Next day we succeeded in getting the consent of his relatives to an operation, and chloroform was administered. It was then believed that the muscles of the left arm and leg were much sooner under the influence of the anæsthetic than those of the right side, which remained rigid until there was complete anæsthesia. A small flap was then dissected up behind the right ear, and a small trephine applied an inch and a quarter above and behind the meatus; a trocar was then slowly introduced, and after it had gone into the brain about three-quarters of an inch a quantity of healthy-looking pus escaped, to the amount of an ounce and a half. A drainage-tube was put in and dressings applied, and the patient awoke free from pain. Next day he rapidly became unconscious, and died about noon. No examination was allowed. In this case acute otitis was followed by cerebral abscess very rapidly, and ended fatally within the year. No cause could be ascertained for the ear attack, either in the case of the man or his wife.

I am indebted to Mr. Shepherd, who attended him, for part of the notes in this interesting case.

Bombay.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

DEATH BY AN ELECTRIC SHOCK.

BY WALTER BUCHANAN, M.R.C.S., L.S.A.

ON March 4th I received a message to visit an accident by an electric light alternating current of 2400 volts. The patient was seen by me, as far as I could judge, about ten minutes after the accident; he then presented the following appearances. The face was livid, lips congested, pupils dilated, bloody mucus issued from both nares, his hands were almost clenched. He was lying on his back, inclined a little towards the *right side*. *Artificial respiration* was resorted to, he inspired slightly three times, and then died. In about four minutes he became quite rigid. There were no marks of violence on the body or head, but on the palm of the right hand there was a dirty mark (no doubt that of japan) about three inches by half an inch. There is no doubt now that this was fused off an iron bar, which it was proved he had in his hand, by the electric current, he having struck at the induction wire off which the insulating indiarubber was fusing. After having raised the bar to strike at the wire, he fell back with *one cry* for help. He was then carried away insensible to the place where I visited him.

Thirty-one hours after death, in conjunction with Drs. Voisey, Holroyde, and Burns, I made a post-mortem examination, and the following appearances were noted. The deceased appeared to be about the age of twenty-six; he was 5 ft. 8 in. high, and weighed about 11 st. The body was well-nourished and strongly muscular; it was cold, post-mortem rigidity well marked, no marks of violence, lividity well marked. Incision showed a quarter of an inch of fat. Abdomen looked healthy when first opened; on lifting up the great omentum the superficial intestines were slightly congested, and the deeper intestinal contents highly congested (hyperstatic). Kidneys normal in size, capsules not adherent, but deeply congested. Liver firmly and universally adherent on the upper surface, normal in size, and very deeply congested. Gall-bladder normal, containing two drachms of fluid. Urinary bladder congested, containing two ounces of fluid. Spleen firmly adherent to the posterior part by bands of adhesions, slightly enlarged, and deeply congested. Stomach contained much semi-digested food and some evidences of old inflammation. Heart normal in size, superficial veins highly congested, right auricle distended, right ventricle flaccid, left ventricle firm and solid, left auricle empty; blood liquid from one to two ounces; walls normal in thickness, no hypertrophy or dilatation; aortic and pulmonary valves slightly thickened and nodular; cordæ tendineæ normal; right auriculo-ventricular ring admits three fingers, and the left one two. Lungs: Right one firmly and universally adherent; both universally congested, the right one more than the left. Tarry blood and air issued on pressure; lungs float easily in water; entire absence of disease. Epiglottis: Larynx and trachea deeply congested, but otherwise normal; no foreign body in larynx. Brain healthy, but congested. Spinal cord healthy, but congested.

Remarks.—We particularly noticed the tarry condition of the blood, as it has been stated that this is caused by the action of the electric current on the red blood-corpuscles. The auriculo-ventricular rings were no doubt enlarged by muscular contraction. The cause of death was evidently by asphyxia. The case is interesting, as we get very limited evidence of deaths from electricity. In those occurring from lightning coroners rarely engage the services

of medical men, and far more rarely order a post-mortem examination, taking other evidence for granted. I cannot conclude without thanking the medical men before mentioned for their valuable coöperation and assistance.

FATAL CASE OF INHALATION OF ROBURITE FUMES.

By W. A. HATTON, M.B.

IT is a strange coincidence that while a committee was investigating the probable effects of this explosive compound, of which THE LANCET of last week gave so able a summary, a fatal case should have occurred lately in the Atherton district, the leading features of which will, no doubt, be of interest on account of its very rare occurrence. The deceased, a miner, was at work on Feb. 9th, and allowing a reasonable time (eight minutes) to elapse after the firing of a roburite shot, proceeded to take down the hanging coal. Ten minutes afterwards he complained of pain in the head and faintness, though he worked till closing time. The next day, when I saw him, he was in a confused condition and complained of a good deal of dizziness and pain, chiefly above the frontal and supra-orbital region; his articulation was thick and almost unintelligible; he was, however, able to give a short account of the whole occurrence, and attributed the onset of the symptoms to the inhalation of the fumes. There were some nystagmus and indistinctness of vision, owing no doubt to the retinal congestion present. The pulse was thready and irregular, ranging from 70 to 90 in the minute; temperature 101°; there was also marked cyanosis about the lips. The respiration was good, though a little hurried, and there were no abnormal physical signs on examination of the chest, no cough or odour noticeable in the breath, neither was there anything to lead to a suspicion of any pulmonary congestion. There had been no vomiting or feeling of sickness. The knee-jerk was a little exaggerated. The cephalalgia became more intense, coma rapidly supervened, and the patient died on the third day. The post-mortem examination was made, in conjunction with Dr. R. Martin of Atherton, on the 15th; the only noticeable point on external examination was the cyanosis of the lips. On opening the skull the dura mater was adherent, and found to be inflamed; there was intense venous congestion on the brain surface, and there was some superficial encephalitis present. Punctiform ecchymoses were unusually numerous on section, and very little fluid was present in the lateral ventricles. On opening the thorax, there was no odour perceptible, as has been noticed in cases of nitro-benzine poisoning; the lungs were intensely congested, more so at the apices, though there was no sign of any inflammatory change. The remaining organs were quite healthy, and portions of lung, liver, the stomach, and a kidney were sent to Dr. Paul for especial examination, though with negative results. There was no trace of carbon monoxide in the blood, tested by the spectroscope, or of the presence of any nitro-benzine compounds. In the report drawn up by Professor Dixon and Messrs. Mounsey and Hannah in the Park-lane Colliery dispute, in relation to the probable effects of the use of roburite, the presence and smell of nitro-benzine were detected in the fumes. On the other hand, at a meeting of the Manchester Geological Society the fumes were stated to be nothing but carbon dioxide and nitrogen; and the joint commission appointed by the workers and owners of the Durham collieries declared that there was no trace of nitro-benzine found in their experiments.

Walkden.

INTER-PARTUM HOUR-GLASS CONTRACTION.

By H. MARTYN EAMES, L.R.C.P. & S.ED., L.F.P.S.GLAS.

THE following case of inter-partum hour glass contraction seems to me to be of sufficient rarity and interest to warrant its publication.

On Sunday, Jan. 31st, I was called to a young multiparous woman in labour, whom I had delivered with forceps eleven months previously. On examination I found the os uteri fully dilated, and the uterine contractions strong and regular. I therefore ruptured the membranes, which resulted in the rapid descent of the head to the perineum. After this the pains gradually, as in her last labour, became inefficient and unsatisfactory; so I applied the forceps, and her delivery was effected without any difficulty, and in about a quarter of an hour a placenta was expelled. Having discovered it to be a case of twins, I examined for the purpose of ascertaining the presentation of the other child, when I found that the liquor amnii had escaped, and the left arm was presenting. I therefore determined, if practicable, to turn and deliver without delay; but upon introducing my hand into the uterus I found the internal os uteri intensely constricted, rigidly unyielding, and tenaciously gripping the upper region of the presenting arm, rendering it impossible for me to pass even one finger beyond the barrier into the upper uterine segment. There being no special indication on the part of the mother for immediate delivery, I determined to await the effect of forty grains of chloral hydrate in two doses of half an hour's interval. On re-examination I found that the internal os had slightly relaxed, and that the funis had descended, and was being compressed by the contracted ring, the pulsation being only slightly appreciable. However, I was able to return the prolapsed cord, but fœtal turning was out of the question, as I was unable to pass more than a couple of fingers through the constriction. In the interests of the child, as indicated by the almost pulseless cord, I placed the patient deeply under chloroform for the purpose of prompt delivery, by turning if possible. Despite this the obstruction only yielded very slightly, and as I found the funis had ceased to pulsate, and there being no maternal indications for immediate delivery, I decided to leave matters alone for a while. In an hour or so I was summoned to my patient, when I found the contraction obliterated, uterine action regular and efficient, the arm obtruding from the vagina and the shoulder had descended into the pelvis. I again administered chloroform, turned and completed the delivery without any further trouble. The hand and arm of the child were deeply cyanosed, much swollen, and a deep sulcus remained on the upper arm at the point where it was gripped, thus proving the intensity and persistency of the spasm. I have referred to several authorities, who only describe cases of ante- and post-partum hour-glass contraction, and hence I presume that hour glass contraction after the birth of the first child in cases of twins is of very rare occurrence, and it suggests itself to me that it may not be inaccurately defined as *inter*-partum hour-glass contraction.

Goole, Yorks.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. BARTHOLOMEW'S HOSPITAL.

ACUTE YELLOW ATROPHY OF LIVER; NECROPSY.

(Under the care of Sir DYCE DUCKWORTH.)

THIS case is recorded as it appears worthy of notice, first, on account of the rarity of the disease, and, secondly, because it differs in some respects from most other published cases. As in many older cases, the jaundice followed a mental shock. With the onset of coma physical signs pointed to rapid diminution in the size of the liver. This probably cannot wholly be accounted for by the shrinking of the liver, but must be partly due to some change of its position—falling away from the ribs. Instead of the urine, as was supposed usually to be the case, being not very deeply bile-stained, albuminous, and with diminution of salts and urea, the excretion in this case was exceedingly deeply bile-stained, not albuminous, and contained a fair amount of salts and urea. The urea, however, in this case was only estimated by the nitrogen method, which, like Liebig's method, is open to error. The nearly complete absence of any hæmorrhage throughout the case is noteworthy. For the account

of this case we are indebted to Mr. F. P. Weber, house physician.

E. S——, aged forty-one, a fish-curer, was admitted into the Elizabeth ward on Oct. 23rd, 1891. History (gathered from her relatives): The patient was in her usual health up to Sept. 26th, 1891. On that date she is said to have received a great mental shock from seeing her youngest child nearly run over in the street. On the following day the patient vomited several times, and jaundice commenced. She did not complain of any abdominal pain at this time or just before. The yellow colour of the skin has gradually deepened since then, and vomiting has continued on and off. Menstruation was regular up to the commencement of the jaundice. Since then she has "lost blood" on and off. No epistaxis or hæmatemesis. During the last fourteen days she has complained much of pain in the left hypochondriac region. She is said to have been "queer in her head" for the last three days, constantly yawning, confused in her ideas, asking funny questions, and doing apparently purposeless things. There was negative history as regards the possibility of phosphorus poisoning. The patient is said to have been always temperate in alcoholic drink, and to have enjoyed good health usually. Never any mental illness. Never jaundice before. There was no history of syphilis. One of her sisters is insane.

On admission the patient was very drowsy, and lay quietly in her bed. At very short intervals she yawned with considerable noise. She sometimes answered questions addressed to her correctly, but often repeated answers to a former question several times, apparently not knowing that a new question had been asked. Temperature subnormal. Respiration natural; pulse rather infrequent. She was exceedingly deeply and brightly jaundiced, the greenish-yellow colour of the skin contrasting strikingly with the flushed and dilated veins on her cheeks. Tongue clean. Pupils equal; ophthalmoscopic appearance of eyes natural. No discharge from the ears. Nothing abnormal was found in the heart or the lungs. The liver dulness commenced at the sixth rib; the edge was felt just above the level of the umbilicus in the nipple line. Spleen not felt; no tenderness to pressure. Very slight lumbar œdema. The upper limbs are moved naturally; no rigidity. Lower extremities were rigidly crossed. Knee-jerks excessive; much ankle clonus on both sides.

Oct. 24th.—Mental condition much worse; will not answer questions. Constantly giving noisy yawns. Seems to see nothing. Recurrent utterances of "Oh, my!" "Oh, dear!" "Oh, my!" "Oh, dear!" at short intervals, with yawns interspersed. Pulse 72; regular, rather excessive tension. Eyelids drooping. Edge of liver not felt. Can draw up the legs. Bowels confined. Urine passed unconsciously, about a pint in the night; sp. gr. 1012; no albumen or sugar; fairly dark with bile pigments.

25th.—Very little sleep last night, in spite of the hypodermic injection of $\frac{1}{75}$ grain of the hydriodide of hyoscin. This morning she is in a deep sleep, a semi-comatose condition, and has to be fed by nasal tube; liver edge not felt; lower limbs not so rigid; knee-jerks excessive, and marked ankle-clonus as before; no plantar reflex; sensation very dulled; the patient just feels the prick of a pin. Urine: sp. gr. 1012, neutral, deeply coloured with bile pigment; no albumen; under the microscope crystals of tyrosin are seen and deeply bile-stained bodies (? leucin); urea estimated 1·6 per cent. The tyrosin crystals increased in number on letting the urine stand till next day. Bowels not opened by two calomel and colocynth pills; small hard white scybala came away after a soap enema.

26th.—At 12.45 A.M. deep coma; respiration 60; pulse 120, very great tension; temperature rising. Eyes: nothing abnormal seen by ophthalmoscope. Liver: no dulness in back or axillary region; one inch and a half of liver dulness in front in the right nipple line from the sixth rib downwards; urine passed into bed, but eight ounces saved. The respiration gradually became shallower, and the patient died at 5.50 A.M.

The temperature was below 98° until the evening of Oct. 25th.

25th Oct., 11 P.M., 100·6°.	26th Oct., 3 A.M., 101·0°.
26th ,, 1 A.M., 100·4°.	,, ,, 4 A.M., 102·0°.
,, ,, 2 A.M., 100·6°.	,, ,, 5 A.M., 102·6°.

Examination of the last eight ounces of urine: It was dark-brown coloured, turbid, the turbidity slightly clearing upon boiling; alkaline; not a trace of albumen. Chlorides, sulphates, and phosphates, about the natural amount. Urea, 1·5 per cent. Two ounces concentrated failed to show leucin; a similar amount concentrated failed to show tyrosin. Examination by microscope of the sediment: It seemed to consist of amorphous phosphates and of "rods" and "crossed-stick" crystals of phosphate of lime. No crystals like tyrosin were seen, even on carefully neutralising the urine and saving it up. The treatment consisted in feeding the patient when she refused food, and relieving the constipation. The presence of tyrosin crystals in the urine decided the diagnosis.

The post-mortem examination was made on Oct. 27th, thirty-one hours after death. Examination of the head and neck was not permitted. Considerable subcutaneous fat; rigor mortis in legs, not in arms; brightly jaundiced; no eruption; congestion of dependent parts; lungs emphysematous, congestion of dependent portions; heart flabby, no valvular disease; some atheroma of aorta and vessels. Abdomen: Liver, weight twenty-eight ounces, completely hidden under the ribs, adhesion to hepatic flexure of colon; the gall-bladder contained some thin yellowish fluid, which could be pressed out through the papilla of the duct. Liver is uniformly small, with soft wrinkled capsule; easily indented by a small stream of water from the tap. The liver substance is everywhere mottled, tracts of a yellowish colour being interspersed amongst tracts of a deep reddish tissue. By microscope: Liver cells were quite broken up in most parts; at other spots they were still to be recognised, though looking shrivelled and angular; around the portal vessels everywhere was a dense infiltration of small round cells; no crystals could be seen in freshly cut sections. The spleen weighed five ounces, soft and decomposing. Pancreas soft. Lymphatics and suprarenals natural. Kidneys natural size; capsule separated easily; cortex a little thin in places. Under the microscope there appeared to be a little increase in the interstitial fibrous substance.

CHISLEHURST, SIDCUP, AND CRAY VALLEY COTTAGE HOSPITAL.

COMPLETE EXCISION OF THE RIGHT ELBOW-JOINT TWICE WITHIN SEVEN MONTHS; RESULT.

(Under the care of Mr. GEO. WM. DAVIS.)

THE points of especial interest in this case are—(1) The absence of pus in conjunction with well-marked caries; (2) symptoms simulating the onset of tubercular meningitis; and (3) the fact of there being but one inch of shortening after the removal of three inches from the continuity of the bones of the limb.

H. M——, aged nine, first came under notice on April 10th, 1891, and was admitted into the hospital on the 16th. The patient, a clever, pleasant-looking lad, markedly emaciated about the body, but showing no signs of disease save in the right elbow-joint, which had been flexed for two years, with loss of all movement and disused on account of pain. No family history of tubercle. On admission the right arm was markedly atrophied; the right elbow, half an inch larger than its fellow, was wanting in distinctive shape and felt relatively hot; of the landmarks about the joint only the condyles could be defined; pressure over the coronoid process caused pain.

From April 16th to May 12th every local treatment was resorted to which it was thought might improve the condition, with cod-liver oil as medicine. No improvement having taken place, it was resolved to excise the joint. On May 13th, assisted by other of the medical officers of the hospital, Mr. Davis performed the operation as follows:—The patient being under chloroform, the usual single incision over the back of the elbow was made, and the inner and outer flaps carefully dissected up by short strokes of the knife, the cutting edge being continually towards the bone; the extreme softness of the olecranon process caused some difficulty. The flaps being cleared from the condyles the olecranon process was removed by an oblique saw cut. The joint was now easily opened, and much diseased synovial membrane was removed by scraping and dissection, as were also pulpy granulations filling the olecranon fossa. The forearm now being flexed to its fullest extent, it was possible to force the head of the radius and extremity of ulna through the incision. One-eighth of an inch was sawn from the articular surface of the ulna, the cartilage had disappeared, and the surface was

hard and roughened beneath the section; the bone appeared healthy and resistant. The head of the radius was now removed for a quarter of an inch, leaving the orbicular ligament intact. On the under surface of the section removed an elliptical yellow patch was observed, suggestive of tubercle; beneath this patch in the shaft of the radius was a cavity of tubular form, a quarter of an inch wide and three-quarters of an inch long, extending towards the tubercle of the radius. The cavity was bounded by hard bone, and contained matter which resembled broken-down sequestrum, but nothing suggestive of pus. This cavity was carefully scraped. The articular cartilage of the humerus was eroded, so the end of the bone was removed up to the condyles, half an inch externally and three-quarters of an inch internally. The whole of the surfaces exposed by the operation were then irrigated by means of a syphon douche, the fluid used being half an ounce of carbolic acid, half an ounce of tincture of iodine, and two ounces of glycerine to one quart of water at 105° F. A drainage-tube was inserted and the incision brought together by eight sutures. The arm was then fixed on an interrupted splint in an almost extended position and dressed with iodoform, protective pine-wool bags, jaconet, and carbolic gauze bandages. The operation had taken two hours and a half. The after-progress of the case was highly satisfactory so far as recovery from the operation was concerned. The patient was out of doors on May 31st. The first passive movements were commenced on June 1st, but were at this time and every other attended with pain. On June 20th the patient was sent to St. Leonards for three weeks. On his return on Aug. 11th no marked improvement had occurred; the condition was almost identical with that before the operation. On Aug. 19th an attempt was made to improve the movement under chloroform.

From Aug. 23rd to Sept. 30th alarming symptoms developed. Unaccountable vomiting, the temperature became intermittent (from Sept. 2nd to the 15th it never fell below 100° F., and on two occasions reached 102°), night screaming, constipation, retention of urine, sweating of the head, and nystagmus were noted. The eyes were examined by direct method, and revealed signs representing optic neuritis. The right elbow had improved in contour, and was free from pain. On Oct. 25th Mr. J. B. Lawford kindly saw the patient, and reported: "Oct. 25th, 1891: Eyes examined ophthalmoscopically: pupils atropised; refraction hypermetropic, about 2 D; exact measurement not recorded; media clear. Optic disc in each eye hyperæmic; margins blurred, and showing radial striation (visible nerve-fibre bundles); vessels at the upper and lower edges partially obscured; no measurable swelling; no hæmorrhage or exudation; vessels not kinked. These appearances most marked in the left eye. The vision was not tested, but was said to be good. The appearances were thought to be due to the hypermetropic refraction, and not indicative of neuritis from intracranial mischief." In confirmation of the above favourable opinion of Mr. Lawford, the boy was found to be gaining weight. On Sept. 4th he weighed 43 lb., and this gradually increased until on Oct. 24th, when he weighed 49 lb. A second operation was therefore contemplated, and on Nov. 23rd, 1891, the right elbow was re-excised, Dr. Battiscombe again giving his assistance. All the stages of the operation were conducted as on the first occasion, but the incision was internal to that of May 13th. The bones removed in this operation were the end of the humerus, part of the ulna and of the radius. There was no definite disease observable; the bones were rough and coated by what had the appearance of organised inflammatory exudation; there was a firm fibrous band uniting the radius and ulna, and the head of the radius was filled with fibrous material. The extent of bone removed was nearly one inch from the humerus, three-quarters of an inch from the radius, and one inch from the ulna. The dressing of the limb was the same as on the previous occasion. There was so much oozing after the operation as to necessitate a fresh dressing; perhaps this may have been due to the bloodless method of operating. The arm was redressed on Dec. 1st, 4th, and 7th. The temperature never rose beyond 99°. On Dec. 16th, the incision being united and firm, the splint was removed, and passive motion to a considerable extent was practised without causing any pain. Passive motion and massage were practised for twenty minutes twice each day until Jan. 20th, 1892, when there were then some pain and stiffness, but these completely disappeared after one week's complete rest of the arm in a sling. At the date of this report—that is, eleven weeks after the operation—the boy can touch his right ear with his right little finger; he can put his hand to his mouth, he can hang from a horizontal bar, can take coal from a scuttle by means of a shovel and place the coal on the fire, an exercise which requires some strength and variety of movement on the part of the arm used.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Adjourned Debate on Phagocytosis and Immunity.

AN ordinary meeting of this Society was held on March 15th, the President, Sir George Humphry, in the chair.

The discussion on Phagocytosis and Immunity was resumed by Dr. RUFFER, who said that he accepted Metchnikoff's view in its entirety. Not one-half of those who had spoken had defined what they meant by immunity. It meant freedom or exemption, and in its absolute sense it was almost an impossibility; for there was no animal naturally protected, or artificially so, that could not be killed by micro-organisms if a sufficient number were introduced. "Resistant" was a word he preferred as better than immune. Metchnikoff had been accused of saying that the destruction of micro-organisms was effected entirely by amœboid cells, but he had never gone so far as that. Dr. Woodhead had already stated what we knew for certain of the origin of amœboid cells; he himself had not stated that all amœboid cells were derived from leucocytes, but he had simply asserted that he had seen such a thing happen. In some of the invertebrates the actual process of development could be watched. As for the ingestion of the micro-organisms by the cells, all that was needed was a lens, a little frog's lymph, and some anthrax bacilli, and the process could then be easily watched. Dr. Klein had laid especial stress on the fact that the process was sometimes reversed, and he instanced leprosy and tubercle as examples of it; but even in these cases the destruction of bacilli was always more marked than the destruction of cells. His experiment of injecting bacilli into the lymph sac of a frog was a fallacious one, for far too great a quantity was introduced, and though the leucocytes of a frog might comfortably be able to destroy as many bacilli as would kill a mouse, yet they could not annihilate as many as would kill an elephant. Dr. Walker and he had injected into adult guinea-pigs a small quantity of a pure cultivation of bacillus pyocyaneus, and the destruction of the micro-organisms introduced was so well performed by the amœboid cells that not a single bacillus penetrated into the viscera of the animal. But if at the time of the injection of the organisms into the guinea-pig a small quantity of chloral was injected into the other side, the leucocytes would be paralysed, and the animal would die with all its organs absolutely crammed with bacilli. There was no evidence to show that the fluids of animals which had been chloralised were better or worse cultivating media than those of animals which had not been chloralised. The poison of the micro-organisms might cause the attraction of the amœboid cells, while under other conditions the poison might repel the leucocytes. If a small piece of sponge soaked in pure turpentine were placed under the skin of a frog, after a time no leucocytes would be found accumulated round it; but if the sponge were soaked with turpentine diluted with olive oil, in a short time it would be found to be crammed with leucocytes; it was evident from this that turpentine would act differently according to its state of concentration. He then proceeded to criticise Dr. Klein's rival theory that the bacilli were attracted by the cells. The argument that the bacilli were found in the cells simply because they preferred to go there was, he thought, absurd. If a lamb were found inside a dead lion it did not follow from that that the lamb of its own choice took refuge there. While he admitted the excellence of the work done by Buchner, he could not agree with that worker that the fluids of a living animal played any part in killing bacilli, and he proceeded to quote much evidence against this view. It was a most remarkable fact that if the serum of an animal was found to possess the power of killing any germ, yet that same microbe, if injected into the living tissues of that animal,

would flourish and multiply. Indeed, the only exception he knew to this was the white rat, which was not only resistant against anthrax, but its serum was also bactericidal to that microbe. He thought it could be laid down as a general rule that there was no relation between the bactericidal power of serum and the resistance of the animal to the micro-organism. It had been recently demonstrated that the serum of animals protected against the pneumococcus was a far better cultivating medium for that organism than was the serum of similar animals not so protected. It was easy to understand why micro-organisms became more virulent when passed through resistant animals, for in them a process of elimination took place, the weaker germs being killed, and only the more hardy of the race surviving; there was no evidence, however, to show that the fluids of a living resistant animal took any share in this attenuation of the virus. In conclusion, he said that he believed the only process essential to resistance or so-called immunity was the power the cells possessed of taking into their interior and destroying micro-organisms, though Metchnikoff and his pupils had never said that this was the only cause of increased resistance.

Mr. BALLANCE said that the question of immunity had an especial and weighty interest for surgeons, whose daily occupation was the making of wounds, which, if they were not rendered immune against the attacks of micro-organisms, might seriously imperil life. This immunity was attained as the direct outcome of the actions of the living cells and fluids in the neighbourhood of the wound. The surgeon could only aid the natural processes by employing means calculated either to prevent the entrance of, or to destroy, or to inhibit the action of, those deleterious things which could thwart the struggle of the injured tissues towards the attainment of immunity. The healing of the body against the more generalised specific diseases was comparable with the processes employed by nature in the healing of wounds. The presence of pathogenic micro-organisms or their poisons in the body constituted, in one sense, really nothing more than the presence of a foreign body, which it was the function of the natural processes to get rid of. The observation, then, of the manner in which nature could absorb and remove foreign material in wounds would to some extent aid us in the study of similar processes when engaged in warfare against disease. He had been assisted by Professor Sherrington in studying the question of repair, and they introduced small Ziegler chambers into the subcutaneous tissue and peritoneal cavity of certain animals. In the chambers, in the tissue around the chambers, as well as in the normal tissue-plasma and normal peritoneal moisture, they found two distinct kinds of cells. The one kind resembled in all respects the leucocyte; the second kind was much larger, and possessed a large oval vesicular nucleus, which stained faintly, and the protoplasm of the cell body was markedly granular. Both these kinds of cells migrated into the chambers, but there was a definite sequence of events—the leucocytes commencing to enter the chamber shortly after it was implanted in the body, whilst the larger corpuscles (which sections of the inflamed tissue around showed to be the daughter cells of the surrounding connective-tissue corpuscles) did not commence to invade the chamber until some eighteen hours had passed. Briefly, the subsequent events observed were a loss of vitality of the small kind of cell and its inclusion in the vacuole of the larger kind. The larger kind, when all available food in the shape of fibrin and blood-corpuscle had disappeared, commenced to lengthen out and spin fibrous tissue. The less nutritious the more inert the foreign body, the sooner did the amœboid tissue cells become fixed. They were greatly assisted in the interpretation of the appearances seen in the osmic fixed preparations by the processes described by Miss Greenwood in the Phizopoda. Just as in her interesting observations little monads coexisting in the same water as amœba proteus were by it ingested, so the leucocyte became the prey of the amœboid connective-tissue cell. In the chambers we observed giant cells formed by the fusion of connective-tissue cells, or by nuclear multiplication without actual separance of the daughter cells from the parent. These giant cell forms seemed especially to be present when the substance to be absorbed was more resistant than usual. We arrived, then, in this way, at the conclusion that the invading leucocyte had only a temporary purpose to fulfil in the healing of a wound. The rush of leucocytes which occurred towards a spot invaded by micro-organisms might be thought of as useful in various ways:—(1) Though of feeble vitality, they might be able to digest and destroy certain of the foreign organisms; (2) by the death of others a ferment might be set free, which might diminish the vitality of some of the bacteria, and thus caused them to be an easier prey of other cells; and (3) abundance of food (in the shape of leucocytes) for the after-coming connective-tissue corpuscles would be associated with the attainment by them of the highest degree of vigour and vitality. All the main work, then, in wounds, not only with regard to repair, but with reference to the removal of foreign bodies, such as clot, ligatures, micro-organisms, &c., fell upon the connective-tissue cell. Their observations gave no countenance to the old Cohnheim doctrine of the development of leucocytes into connective-tissue cells. The legitimate succession of cells was now a well-established law in pathology, as well as in embryology, and, according to this, tissue was never produced by substitution of function. No positive proof had yet been furnished that the elements of the blood took any active part in the restoration of lost parts. It did not appear reasonable or logical that such an indifferent cell as the leucocyte should ever become transformed directly into a fixed tissue cell, and it was still more improbable that it should be possessed with such a diverse vegetative capacity as to undergo a transition in one place into a connective-tissue cell, in another into bone, and still another into muscular fibre. And if leucocytes in the healing of wounds had a subordinate function to fulfil, it was probable that they had a subordinate place in the fight against disease and in the attainment of a state of either natural or acquired immunity. In the formation of an abscess it was not the leucocytosis to the part which arrested the disease, but the wall of connective tissue formed around the infected spot by the aftercoming connective-tissue corpuscles. The speaker then discussed the question of the action tissue cells had upon substances outside themselves, and gave his reasons for believing that these cells furnished to the body fluids their bactericidal power. The death of leucocytes, which was always occurring, might be thought of as setting free into the body-fluids fibrin ferment, and fibrin ferment (if it existed) must be closely allied to Hankin's anti-toxic substance and Wooldridge's tissue fibrinogen. Clearly, whatever was in the fluids of the body must come from the cells. The normal physiological activity of the cells of the body might thus possibly explain the defensive action of the healthy tissues and fluids against bacterial infection. This clearly existed, for to produce disease a definite dose of micro-organisms must be administered. The normal quantity of anti-toxic substance present during any given period might perhaps correspond to the anti-toxic substance present in the food vacuoles *plus* the quantity secreted from the surface of the cells into the surrounding fluid. If, on the other hand, it were proved that living serum and plasma were not bactericidal, it followed that the anti-toxic substance was a weapon only used under conditions of irritation or emergency by the cell. It might be that an increase in the normal physiological activity of the cells, acquired as a habit, might explain, to some extent at least, some of the varieties of immunity. In conclusion, he desired to express the opinion that, however beautiful the researches might be that were conducted by the aid of the microscope alone in revealing more of the activity and life of cells, yet that in this way we should not progress far on the road towards a true knowledge of the intimate pathology of immunity. The problem of immunity was essentially a chemical one, and its solution must be sought in the laboratory of the chemist.

Dr. E. H. HANKIN said that all previous speakers had taken one or other of the two sides of the question under discussion, but he believed that it was perfectly possible to take a middle course and combine the two opposite theories. There was a good deal of evidence to support the view that if an animal was naturally susceptible, very little phagocytosis occurred, and *vice versâ;* and on the other hand there was a certain amount of evidence that, after immunity had been acquired, the fluids of the body possessed bactericidal power. It was a pity that those who belonged to the school of solidists seemed to imagine that every additional piece of evidence bearing out the truth of the theory of phagocytes was of necessity evidence against the humoral theory, and similar reasoning had been adopted by those of the opposite camp. It appeared to him that the phagocyte theory was much like that put forward to explain the power of the magnet, and like it, though it was not the

ultimate explanation, and did not contain the whole truth, had yet been of service, and had led to good results. He desired to discuss in a somewhat polemical way certain criticisms which had been made against his work. It had been asked if there was any evidence that elexin was a definite chemical body, or was it only a hypothetical body supposed to exist in fluids possessing bactericidal powers? He reminded them that elexins were probably proteids, and, like most proteids, were excessively difficult to obtain in a pure state. Many observers had shown that blood serum possessed a certain power of killing bacteria, and that this substance existed in small quantity, and was probably allied to the fibrin ferment. Some time later Halliburton isolated a body which he called cell globulin β, and which he thought was identical with fibrin ferment. By putting two and two together the speaker came to the conclusion that the proteid of Halliburton was the bacteria killer, and he did his best to obtain this body in a state of purity. Dr. Wright had suggested that these elexins were identical with the tissue-fibrinogen of Wooldridge; but there was much evidence to produce against this view. They had, for instance, exactly opposite effects as to clotting, and he was prepared to give many other reasons as to his belief in the non-identity of these two bodies. He then dealt at length with the criticisms of his work by the French investigators; they had repeated some of his experiments and obtained different results, but they had not used cultivations of the same virulence as his own. They regarded the death of the micro-organism not as due to its being poisoned by the chemical substances contained in the fluid, but rather to a change of the media. This he considered as tantamount to saying that if a man died of poisoning by arsenic he had succumbed to a change of diet. A baby rat's blood had no power of delaying disease or of preventing it; but yet it had just as great a power of attracting leucocytes to the seat of inoculation as that of an adult rat; this was because the blood of the latter contained a fluid of bactericidal power which was lacking in the former.

Dr. SIMS WOODHEAD, in reply, drew attention to the word "immunity," which was used in two different senses in clinical and experimental work. A patient was only exposed to the ordinary chances of infection as usually understood, whereas an animal in the hands of the experimenter was subject to very different conditions, as, for instance, when injected with an organism of specially virulent character. It was well known that under suitable conditions an organism might become much more virulent than usual. In the case of the tubercle bacillus, if it were injected into the peritoneal cavity of an animal, which was ordinarily insusceptible to the bacillus, tuberculosis could be produced with great certainty. He thought that specificity was to a great extent a question of phagocytosis; that, if an animal was immune, it was due to its phagocytic power. Professor Klein's case of injecting innumerable anthrax bacilli into the lymph-sac of a frog had no analogy, and, as Metchnikoff had stated, the phagocytic power of the leucocytes might in certain individuals be imperfectly developed. With regard to the main question, all the positive evidence was in favour of phagocytosis so far as the earlier stages of infective diseases were concerned, and it was the only theory on which both the experimental and clinical evidence could be explained. There was no real evidence for the humoral theory, and such would always be difficult to get. Results obtained with serum, which was a product of dead blood, could not be assumed to hold good for living blood. He quoted some experiments of Pflüger's, in which, after injection of peroxide of hydrogen into the blood of a living rabbit, no effect was produced so long as no blood escaped; but, if a single drop exuded, an evolution of gas occurred, not only in that drop, but throughout the blood of the animal. Again, freshly drawn pus had bactericidal properties which disappeared after the pus had stood for some time. These experiments showed how delicate was the substance with which we were dealing. Klein's fluid, obtained by dialysis through collodion from the lymph-sac of a frog, ought not to be considered as exactly the same as the lymph from which it was drawn; yet results obtained with this fluid were taken as holding good for the fluids of the living animal so far as its bactericidal powers were concerned. He could not agree with Klein's statement, that bacilli got into the leucocytes to avoid the bactericidal blood-plasma, for many of them were non-motile, and could not possibly push their way into the leucocytes. If a paralysed lamb disappeared in the neighbourhood of a lion, it would be only fair to accuse the latter of some active part in the transaction. He firmly believed that the discussion, if it had not brought to light much new truth, would yet open up many new paths for investigation.

Sir GEORGE HUMPHRY, having thanked those who had contributed to the discussion, congratulated England on its rising school of bacteriologists, who had accomplished so much, though having great disadvantages to contend against, owing to the false sentimentalism and prejudices against the true interests of humanity which existed in this country. Though he expressed himself as unable to sum up at all adequately the points of the discussion, yet he desired to offer the impressions the remarks of the speakers had made on his own mind. Zymotic diseases were dependent upon the introduction of micro organisms into the system, and these microbes possessed the power of rapid propagation, and exerted a pernicious effect upon the organs of the body. They produced, moreover, certain excreta or toxines, which, even more than the microbes themselves, were prejudicial. The microbes and their toxines could not be dissociated; they both came into contact with the cells of the body, and with the body fluids. These body cells were undergoing continual change—change essential to their vitality, absorbing, modifying the material absorbed, and returning what was excreted into the fluids around. All body cells were phagocytes; that was an essential feature of their existence. But they were promiscuous feeders, and would take up other things besides those normally supplied from the blood—they would absorb foreign matters—they would certainly absorb bacteria. Speaking technically they were phagocytic as regarded the bacteria with which they came in contact, and there was abundant microscopical evidence of this, that they could exercise a solvent or destructive influence upon them. By far the majority maintained that the cells were an important element in the destruction of bacteria. Professor Burdon-Sanderson had found it difficult to conceive that there could be any special function in cells by which they could exert this malignant influence upon bacteria. But it was not necessary to assume that they were specially bactericidal; they were only phagocytic to bacteria by virtue of their general phagocytic qualities; it was a part of their general natural function, and not a special endowment. There was evidence that certain poisonous elements introduced into the blood did tend to attract leucocytes into their neighbourhood. In some cases the cells, so attracted, overpowered and destroyed the bacilli; while in other cases they failed to do so, and the microbes spread over the system. In such instances cells might be found packed with microbes, the latter afflicting the former with such an indigestion as to cause their death. On the whole, the general result of the discussion seemed to be in favour of the phagocytic action of leucocytes and other cells upon bacteria. A much more difficult question was the effect of the body fluids upon the bacilli and their toxines. In considering that we passed out of the range of ocular inspection and almost beyond the range of chemical examination, we had to deal with fluids of very peculiar composition and very great instability. It was found that the fluid serum in the test-tube might be fatal to a micro-organism, and yet inject that microbe into an animal from which the serum was obtained, and it would flourish there; this showed with what delicate materials one had to deal. In this part of the discussion it seemed to him that the probability was in favour of the humoralistic view. But the fluids and the solids of the body interacted so intimately each upon the other that there could be no such thing as solidism and humoralism separately. Anything that could affect the blood serum must also produce an effect upon the cells and the bacteria in it. The toxine of the bacteria diffused throughout the blood serum must exert some pernicious effect upon that serum as well as on the cells, and the serum so altered might finally react on the bacteria, and we must not assume that there was no effect because we could not demonstrate it. All the results he had spoken of so far had been obtained by experiment upon animals, but Dr. Bristowe had thrown some practical light upon the subject. He had remarked especially upon the resistance offered to the entrance of bacteria to the body, and referred to the probability that they became altered in their passage. When we considered the utterly inappreciable evidences there were to account for the degree of immunity possessed by different persons, we should not be surprised that it was surpassingly difficult to trace out the causes of immunity in different

animals. He regarded it as almost hopeless to form an idea of the essential nature of the change which produced immunity from small-pox by vaccination. He regretted that the point of exhaustion had been rather summarily excluded from the debate. The manner in which a disease attacked one part, ceased there, and passed to another was difficult to explain on any view, phagocytic or other. The migration area in the course of a common cold was an instance in point. He referred to the phenomena of scarlatina, its incubation, its sudden accession, the sequence of phenomena to quiet subsidence, and, if not fatal, the immunity of the subject for a period. How was this explained by phagocytosis or any other theory? To what influence did the microbes succumb after having obtained a maximum of power? Was it because of some poison which they themselves engendered, or because they had exhausted the pabulum upon which they existed? It was difficult to explain the course of certain diseases of the skin by any theory of phagocytosis. We might rest assured that the interest in this subject had not yet passed away, for many of these problems were still invested with uncertainty, and that uncertainty was an invitation to work yet to be done.

The following card specimens were shown:—

Mr. J. J. CLARKE: (1) Cystic Mamma; (2) Colloid Carcinoma.

Dr. H. D. ROLLESTON: (1) Large Sebaceous Cyst in Brain; (2) Vermiform Appendix and Enterolith.

MEDICAL SOCIETY OF LONDON.

The Treatment of Diabetes.

AN ordinary meeting of this Society was held on March 14th, Dr. Allchin, Vice-President, in the chair.

The customary votes of thanks were unanimously accorded to the retiring president and to the officers and members of the council.

Dr. RALFE read a communication on certain questions in the Treatment of Diabetes. He said that the points which he wished to submit for consideration were—(1) in cases of confirmed diabetes running a protracted course: might any relaxation from the usual dietetic restriction be permitted? (2) in such cases at what period of the disease should opium or its derivatives be commenced, and how far might the drug be pushed? The first question might be considered superfluous were it not that of late certain relaxations had been introduced, chiefly by continental physicians, proposed partly with a view of improving general nutrition, and also to prevent the dangers arising from the accumulation of morbid products, the result of a purely proteid dietary. Dr. Ralfe divided these cases of confirmed diabetes into two classes: 1. *Alimentary*, in which the sugar was at first entirely removable by dietetic restrictions, and was probably entirely hepatic in origin, but in which, after a time, the glycosuria failed to be entirely removed by restricted diet, and a portion of sugar remained non-removable. 2. *General*, in which, from the onset, only a portion of the sugar was reduced by diet, the remainder being non-removable by any amount of restriction. This form of diabetes had usually a neurogenic origin, and was also observable in the so-called cases of pancreatic diabetes. With regard to the origin of this non-removable sugar, it did not proceed, the author thought, entirely from the metabolism of the proteid elements of the food, as had been taught, but from the transformation of the glycogen held in the other tissues and organs of the body beside that of the liver, either by a general lowering of the power of sugar assimilation in the body by the continued passage of sugar into the circulation, or, as some had recently thought, owing to the loss of a sugar-destroying ferment in the blood—glycolytic, normally furnished by the pancreas and other glands. Dr. Ralfe then proceeded to state that observations he had made led him conclusively to the result that in purely *alimentary* diabetes any addition, however slight, of starchy or saccharine food to the diet still further lowered the assimilative processes in the liver, and caused an exacerbation with respect to the amount of sugar excreted, whilst in the *general* form any relaxation of diet led to an increase in the "non-removable" sugar, showing that the disease was assuming a more serious form. In one case in which on strict diet the proportion of removable sugar was as 5 to 1 non-removable, it became after a short resumption of mixed diet only 1 to 1·6. Having shown that a relaxation in diet always aggravated the disease, the author went on to prove that the relaxations proposed were insufficient to combat any theoretical dangers resulting from a proteid diet. The modicum of bread, milk, mashed potatoes, and sub-acid fruits proposed were insufficient in themselves to restore the balance, whilst they contained sufficient sugar to materially injure the patient. Instead of such relaxations Dr. Ralfe was in favour of lowering the amount of proteid taken, of which he showed the diabetic often takes too much, and of increasing the green vegetable food, which is frequently much neglected. Massage, too, also powerfully aided the assimilation of the proteid food. With respect to the second question, Dr. Ralfe remarked that there were no rules regarding the administration of opium and its derivatives, some giving it early, some late, some not at all. Nor was the character of the opiate best suited for administration yet finally decided on; for whilst Dr. Pavy advocated codeine, Dr. Mitchell Bruce had recently put in a claim for morphine. Nor was there any reliable information as to how far the drug might be pushed. The author endeavoured to answer these questions by the light of his own observations, and was of opinion that opium and its derivatives should not be administered so long as the glycosuria could be entirely controlled by diet; but as soon as the sugar was not entirely removable by the strictest of diets, then opium should be commenced, and might be safely increased as long as the excretion of sugar continued to fall under its administration. The signal for stopping any further increase of the drug was when no further fall took place, when an increase was made, or when an actual rise took place in spite of it. Dr. Ralfe also made some remarks regarding the individual preferences of some patients for special preparations of the drug, the greater tolerance of some than others for it, and the best time, as regards food, for its administration.

Dr. PAVY, having congratulated the author on the excellence of his paper, said that the views put forward did not exactly correspond with his own. He would lay more stress upon dietetic measures than Dr. Ralfe appeared to do. He regarded diabetes as essentially the faulty assimilation of the carbo-hydrate elements of food. The fact should not be lost sight of that glycogen and sugar were universal constituents of the body. Carbo-hydrate material might be locked up in proteid compounds, such as the glucosides. Mucin, which existed extensively throughout the body, had comparatively recently been demonstrated to be a glucoside, a complex proteid molecule consisting of a simpler proteid in combination with a carbo-hydrate. As he looked upon all diabetes as being due to defective assimilation of carbo-hydrate matter, he could not follow the author's classification. The statement often made, that the liver was more saccharine than other organs of the body, was not true; nor was it true that the portal vein contained less sugar than the hepatic vein. He had performed a great number of experiments with a view to determine this point, and in all instances he found that the portal vein contained much more sugar than did any other vein in the system, and therefore, if blood of the same quality as the portal blood circulated through the body generally, it would certainly invariably give rise to diabetes. The amount of sugar found in the urine was always proportionate to the amount of sugar at the time in the blood. A trace of sugar could always be found existing in normal urine, which corresponded precisely with the amount found existing in the general circulation. A deviation in the amount of sugar in the urine would indicate a deviation of the blood in this respect from its natural state, and in proportion to its deviation from this natural state would be the impairment of the health of the patient. If his views were correct, it followed that the first object in treatment should be to bring back the blood to its natural state. In some cases there was actually a return of assimilative power, but this would never come about if the urine were permitted to contain much sugar. His habit with those patients whose assimilative power was gradually being restored was to give them some carbo-hydrate, at first in very small quantities, and then gradually increase it, taking the urine as a guide, and keeping it free from sugar. The kind of carbo-hydrate material administered was perhaps not of much moment, but it should be remembered that substances like cane sugar were more irritating than the starches. Given a patient under diet in whom the assimi-

lative power was being restored, a safe indication of this was to be found in the fact that when the restoration was beginning the patient would commence to lose weight, though previously, under the same regimen, he had been gaining weight. In the case of people beyond middle life, where the assimilative power was not restored, they would keep on a restricted diet for years and not lose weight.

Dr. LAUDER BRUNTON was glad to hear that Dr. Pavy believed there was a certain percentage of sugar in ordinary healthy urine. For his own purposes he had divided these cases into the true diabetics and the gouty glycosurics; the former were usually thin, nervous people, and in them the disease began early in life and ran a rapidly fatal course. In the second category the patients were usually of middle age, full habit, robust frame, and red face. The disease usually yielded readily to diet and exercise, and when the sugar went from the urine it was generally replaced by oxalates or uric acid. He referred to the case of a lady aged eighty-five who for thirty years had passed a quantity of sugar in her urine, but she was still healthy and strong. Though there were these two distinct classes, yet he had often met with mixed cases. In the second variety he had found the administration of salicylate of soda of more benefit than that of opium. He referred to an article which he wrote many years ago in Reynolds's System of Medicine, in which he rather threw cold water on the skim-milk treatment of diabetes. He desired now to correct that criticism, and to state that he had found this treatment very useful, especially in cases in which the glycosuria was combined with albuminuria; in such instances it gave sometimes very good results indeed. He advocated, as an article of diet useful to diabetic patients, the *pommes de terre frites*, as cooked in France. They were not really fried, but the potatoes were cut in very thin slices, thrown into boiling oil, which browned them at once, and then they were taken out and dried. As a rule English cooks, in attempting to make this dish, did not use enough oil, and they did not allow it to heat enough. They served excellently to relieve the monotony of a purely proteid diet. In hospital practice he had been accustomed to prescribe for diabetic patients a draught containing iron and morphine, which he had found very useful in those cases in which it was impossible to carry out a rigid system of diet. But more than one case had ended fatally under this treatment, although the morphine only amounted to three-sixteenths of a grain in the twenty-four hours. He had now made it a rule never to administer morphine if the aceto-acetic reaction with perchloride of iron were present in the urine.

Dr. MITCHELL BRUCE agreed in the necessity of endeavouring to lay down definite rules to follow in particular cases. First, as to the time when opium should be commenced, he did not think it necessary to begin to administer opiates until the dietetic treatment had been exhausted. As to the form of drug which should be chosen, no doubt many cases were better treated with opium than with the pure alkaloids; but he himself had selected morphine because it was a definite substance, and its dose could be so easily regulated; and of the salts he had chosen the acetate in order that he might administer it subcutaneously if he wished to. It should not be given sparingly if all were going well, but it was unwise to push it to extremities in order to rid the urine of the last small quantity of sugar which it contained; it was most difficult to get rid of the latter, and it was foolish to try to do it by means of an increase of the remedy.

Mr. STILLINGFLEET JOHNSON said that he believed that there was no sugar whatever in normal urine. The reducing agent was certainly removed from urine by precipitation with mercuric chloride, which latter would not precipitate sugar.

Dr. ALLCHIN demurred to the common belief that the analysis of the urine from day to day was an exact index of the effect of the diet on the patient, and in the older chronic cases the amount of sugar passed was far from being an exact index of the state of the patient's health.

Dr. RALFE, in reply, thought that they were all very much in touch upon the question of restriction of diet. Dr. Pavy, however, had mistaken the drift of the paper, which was to insist strongly on dietetic measures, as also to point out that the glycosuria might be furnished by the carbohydrate element in proteid tissues. His paper had no reference to cases in which the assimilative power was restored, and he agreed that there were so many cases of all grades that it was exceedingly difficult to classify them. Of the opium preparations, he relied upon morphine as being a more definite substance than codeia, though he often combined it with advantage to some other preparation of the drug.

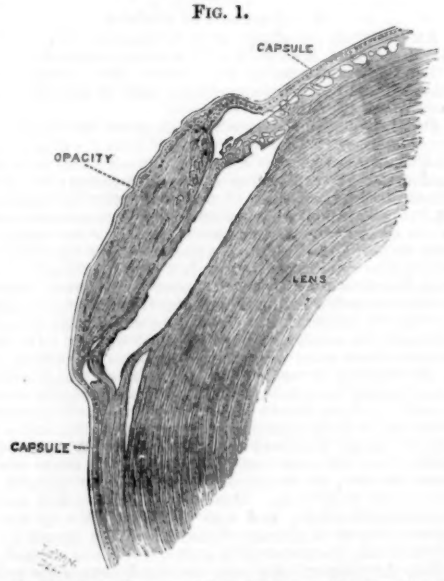
OPHTHALMOLOGICAL SOCIETY.

The Minute Anatomy of Pyramidal Cataract.—The Physical Factor in Conical Cornea.

AN ordinary meeting of the above Society was held on Thursday, March 10th, the President, Mr. Henry Power, F.R.C.S., in the chair.

Mr. TREACHER COLLINS read a paper on the Minute Anatomy of Pyramidal Cataract, which was illustrated by a number of photomicrographic lantern slides. He described six cases which formed a series with relation to the date of formation of the cataract and that of excision of the eye. The most recent was one in which the opacity was of less than six weeks' duration, whilst in the oldest it had existed for twenty-one years. The earliest changes were shown to consist in a localised proliferation and breaking up of the epithelial cells which line the hyaline capsule at the anterior pole of the lens, with some elevation of this capsule. (See Fig. 1.) There was also some breaking up of the lens fibres immediately beneath these proliferated cells, which gave rise to shallow excavation of the lens substance. Pyramidal cataracts of longer duration were found to have a layer of cells between the opaque part and the unaltered lens substance. These were continuous with and apparently derived from the cells lining the anterior capsule elsewhere. (See Fig. 2.) In two cases of some

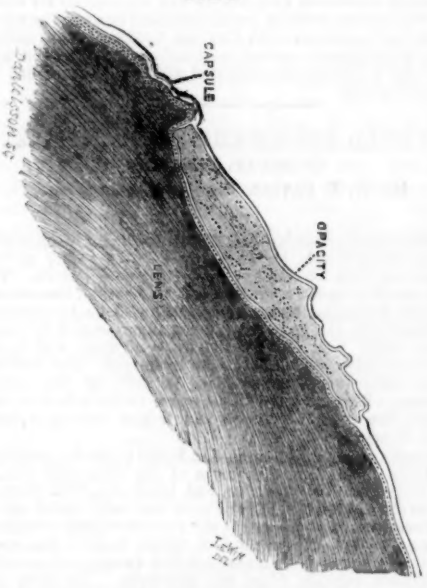
FIG. 1.



years' duration there existed between the opacity and the lens substance, in addition to the layer of cells, a layer of hyaline capsule, apparently secreted by the cells. Mr. Collins thought these cases helped to explain the readiness with which these opaque portions sometimes became detached on being touched with a needle, for such a slight disturbance only completed a separation which had already been partially effected by natural means. (See Fig. 3.) He considered that they also threw some light on the development of the lens capsule, for if the epithelial cells lining it were capable, on the application of a morbid stimulus, of secreting a hyaline layer identical in all respects with it, the inference that the capsule was originally formed by such a secretion seemed a reasonable one. Mr. Collins challenged the statement which had been made, "that in the majority of cases pyramidal cataract was found associated with a perfectly transparent cornea." This, he thought, could only be proved or disproved by the pathological examination of a large number of eyes with opaque cornea, and he questioned if this had been done by

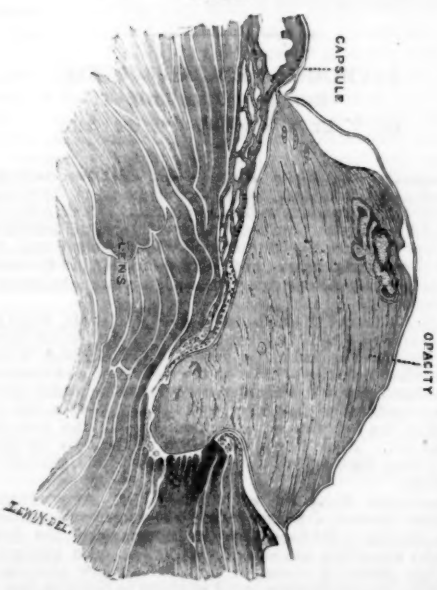
those responsible for the above assertion. In his six cases the cornea was the seat of old or commencing opacity.—Mr. TWEEDY referred to the rarity of opportunities for the microscopical examination of pyramidal cataract. He exhibited a sketch he had made many years previously of the appearance of the lens

FIG. 2.



capsule in the case of a child with perforation of the cornea and escape of the lens in the course of ophthalmia neonatorum. He was of opinion that an inflammatory deposit first occurred upon the lens capsule, and set up an intra-

FIG. 3.



capsular cell proliferation. He was opposed to Mr. Collins, view, that the lens capsule was entirely derived from the cells lining it, and thought that its origin was partly epiblastic and partly mesoblastic. He had only once seen a case of pyramidal cataract with perfectly clear corneæ.—Mr. NETTLESHIP mentioned a case in which he had made sections of a lens affected with pyramidal cataract, and found that the capsule passed in front of the opacity. He could not say whether the capsule was split into two layers, as in some of the specimens shown.—Mr. COLLINS, in reply, said he would divide cases of opacity at the anterior pole of the lens into three groups, and to only one of these could the term "pyramidal cataract" be properly applied. He maintained that the structure of the lens capsule and the character of the diseases which affected it were evidence of its epiblastic origin.

Mr. TWEEDY, in relation to the Physical Factor in Conical Cornea, made a communication to the Society, in extension of some remarks by him at the previous meeting. He alluded to several theories that had been put forward in explanation of the causation of this curious disease, such as—(1) increased intra-ocular pressure; (2) malnutrition and atrophy of the central part of the cornea; (3) diminished power of resistance; (4) inherent weakness of the corneal structure. The last hypothesis he thought was most in conformity with observed facts, and this inherent weakness he considered was best accounted for by imperfect completion of the developmental processes. In early fœtal life the gap in the embryonic cornea, caused by the involution which gave origin to the lens, was filled up by cells, beneath which was a homogeneous layer. Into this layer an intrusion of mesoblast took place, and, extending centripetally, gradually closed over the central part, which was the last to be formed. This mesoblastic tissue was the fœtal cornea, and the physical factor in conical cornea consisted in the imperfect growth of the central portion of this layer. No other explanation, he thought, would account for the conical shape assumed by the cornea in this affection.—The PRESIDENT asked if Mr. Tweedy's hypothesis would explain the onset of keratoconus in adult life.—Mr. BRAILEY mentioned that he had once made a microscopic examination of a portion of conical cornea removed by operation, and found a small cavity just beneath the epithelial layer. He referred to the fact that conical cornea in some cases developed for a time, then appeared to become stationary, and subsequently underwent rapid increase.—Mr. TWEEDY, in reply, said he did not wish to exclude the agency of other factors in the causation of conical cornea, but merely to draw attention to what he thought was the true physical one.

The following living and card specimens were shown:—

Dr. ROCKLIFFE (Hull): Case of Unilateral Proptosis.

Mr. HARTRIDGE: Case of Double Lacrymal Fistula.

Mr. WORK DODD: Case of Scleroderma of Lower Eyelid and Cheek.

Dr. D. J. WOOD: (1) Disease of Retina and Choroid, with Detachment of Retina; (2) Double Congenital Coloboma in Fundus.

Mr. TAY: Bleaching of Eyelashes and Eyebrows in Sympathetic Iridocyclitis.

Mr. LAWFORD: Reversible Spectacle Frame.

Mr. WRAY: New Vascular Growth in Vitreous.

Mr. HOLMES SPICER: Keloid in Scars of Herpes Ophthalmicus.

MANCHESTER PATHOLOGICAL SOCIETY.

WEDNESDAY, FEB. 10TH.

T. C. RAILTON, M.D., M.R.C.P., President, in the chair.

Birth Palsy.—Dr. RAILTON showed specimens from a case of Double Spastic Hemiplegia in an idiotic boy aged three. There was a history of difficult labour, forceps, and asphyxia. On admission into hospital it was noted that he lay habitually upon his side, with head strongly retracted, the thighs crossed and somewhat flexed upon the abdomen, the feet being extended. All four extremities showed "lead pipe" contracture. The slightest touch produced universal rigidity, so that he could be lifted "all of a piece." When fed, the muscles of the lower jaw were thrown into spasm. There was fine tremor of the hands when raised, and on yawning general clonus occurred. Knee-jerks were exaggerated and the superficial reflexes active. On being held up under the arms he became universally spastic. Death occurred from broncho-pneumonia. The necropsy revealed little alteration in the naked-eye appearance of

the brain. There was merely a slight depression, forming a shallow groove, most marked near the vertex, which ran parallel with and involved the pre-central fissure, the fissure of Rolando, and the central convolutions, in both hemispheres. The pia and arachnoid in these regions were thickened, opaque, and adherent. A similar thickening of the pia was found over the temporo-sphenoidal region and at the bases of the frontal convolutions, but no depression. The paracentral lobules were slightly depressed and the pia was thickened and opaque. The base of the brain was normal.

Sections of Whole Organs.—Professor DELÉPINE exhibited a series of transparent and of opaque sections of Brain, Heart, Lung, Liver, Spleen, Kidney, Intestine, &c., and pointed out the advantages offered by this method of preservation, for teaching purposes and for preserving the appearances of lesions. He then described in detail a section of lung, in which the whole organ had been infiltrated with soft pneumonic products, as a result of destructive lesions of the vagi due to aneurysmal pressure. These pneumonic products were full of tubercle bacilli, yet there were no indications, either in the lung or elsewhere, of the formation of any miliary tubercle or of any cheesy products. There was, in fact, a distinct tuberculous infection without any tuberculosis. The bacilli had grown in the pneumonic products just as they might have in a nutrient medium kept in a test-tube, and incubated. Dr. Delépine then briefly described the method of preparing these large sections; it was first described by Professor Hamilton some ten years since.

Fractured Skull in an Infant.—Dr. KELYNACK showed Skull-cap and Brain from an infant of five months, where extensive fracture of the vault resulted from a fall. At the necropsy there was no evidence of external injury. A fracture extended from a little in front and above the right parietal eminence, backwards across the lambdoid suture, into the occipital bone. There was no laceration of underlying dura mater, but distinct subdural clot on the opposite side. The frontal and parietal lobes were covered by an effusion of puriform lymph. No distinct cerebral symptoms occurred at the time of the accident, but convulsive attacks appeared on the third day, the temperature rising to 106·2°. The little patient became comatose, and died four days after the fall. The infant was the subject of early rickets, but otherwise healthy.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, FEB. 17TH.

Mr. ANDERSON, F.R.C.S., President, in the chair.

Typhoid Fever.—A paper on the treatment of typhoid fever was read by Dr. W. E. TRESIDDER. He advocated careful watching, nursing, dieting, and keeping up the patient's strength until the fever had run its course. Drugs were only needed for the treatment of special symptoms. The mortality at the General Hospital, Nottingham, for the year 1890–91 was 6·1 per cent.; eighty-one cases were treated. The preventive treatment might be divided into the prevention of immediate infection and general prevention. The patient should be kept scrupulously clean, tow being used for cleansing instead of lint, sponge, flannel, or pocket-handkerchief. All sheets, blankets, &c., should be put immediately on removal in an antiseptic fluid. The nurse must wash her hands immediately after attending to the patient and before either giving or taking food. As regards general prevention, water companies should be heavily fined for supplying water polluted at its source or in transit. There was necessity for legislative reform in the existing system of the drainage of dwelling-houses. The machinery of compulsory notification was put in motion too late after the disease had got a hold. The landlord of any property should be held accountable for the state of the drainage, and punishable by fine if it were found defective, whether disease had broken out or not. There should be two sets of plans of the drainage of any property—one kept by the landlord and the other at the sanitary offices, where tenants or those about to rent property might inspect it on paying a small fee. Any alterations in the drain system made from time to time to be entered on the plans.—After some remarks from the President, Dr. HANDFORD remarked on the relation of case mortality to the age of the persons affected. The larger the proportion of young subjects attacked, the lower the mortality. While confessing to some disappointment in the results of treatment by β naphthol, he thought that in the present state of our knowledge of the cause of the disease an antiseptic plan of treatment the most rational.—Dr. BOOBBYER thought carelessness in connexion with dairies was responsible for much evil, while in the country people persisted in drinking water known to be unsafe.—Dr. CATTLE would hesitate before giving purgatives as routine treatment of constipation, but occasionally the administration of calomel was attended by brilliant results.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY

THURSDAY, FEB. 25TH.

Mr. W. F. FAVELL, President, in the chair.

Spasmodic Torticollis.—Mr. ATKIN showed a woman with spasmodic torticollis, for whom six months before he had excised an inch of the left spinal accessory nerve. The relief afforded by the operation was immediate, the patient eating and sleeping better than she had done for months. Unfortunately the symptoms gradually returned in seven weeks' time. The muscle, though weakened, was by no means entirely paralysed by the operation. The cervical nerves were evidently affected as well as the spinal accessory. The only assignable cause of the affection was trouble, the patient being a widow and having a large family to support.

Sarcoma of the Mesentery.—Dr. KERR showed a specimen of a large spindle-celled sarcoma of the mesentery from a man forty years of age, who had been under Dr. Porter's care in the infirmary. The illness had only lasted about ten weeks, during which time the tumour rapidly increased in size, although the discomfort arising from it was comparatively slight. The mass weighed twenty-one pounds, and almost entirely filled the abdomen. The liver and mesenteric glands were infiltrated with nodules of new growth, many of which had undergone cystic degeneration. All the other organs were free from malignant disease. Microscopic sections which were exhibited showed the tumour to be composed of large nucleated spindle cells, intermingled with a few round cells. The tumour was very vascular, the vessels being imperfectly formed.

PLYMOUTH MEDICAL SOCIETY.

SATURDAY, FEB. 13TH.

Mr. T. LEAH (Stonehouse) in the chair.

Congenital Syphilitic Ataxia.—Mr. ELLIOT SQUARE showed a girl, aged nine, whose mother had had three miscarriages. The patient walked in a marked ataxic manner, the tendon reflexes were absent, she had interstitial keratitis, and typical notched upper incisors. For ten days past she has had left facial paresis and deafness of left ear for three or four weeks. Ataxia commenced about six weeks ago and has increased.

Left Traumatic Hemiplegia in a Pigeon.—Mr. SQUARE also exhibited a hen "feather-footed tumbler," which three weeks ago was pecked on the vertex by another bird. There was evident bruising of scalp on the right side, and the bird walked and flew with difficulty. There is now a bare patch on the right half of the vertex, and the pigeon flies, but on walking the left foot slips backwards, and the toes are spread out. There is no depression of skull to be felt, and young feathers are now sprouting on the right half of the scalp.

Traumatic Ganglion of Thumb.—Dr. ANSTRUTHER RENDLE showed a woman, aged sixty-one, who thirteen years ago ran a fishbone into the inner side of the right thumb; a swelling the size of a walnut at once appeared, and has gradually increased in size. It now presents a painless, semi-fluctuating ovoid swelling in the situation of the right thenar eminence—quite superficial and unconnected with bone or tendon.

Reviews and Notices of Books.

A Treatise on Diseases of the Lungs and Pleura. By the late WILSON FOX, M.D., F.R.S. Edited by SIDNEY COUPLAND, M.D., F.R.C.P. London: J. & A. Churchill.

THE appearance of the late Dr. Wilson Fox's book on "Diseases of the Lungs and Pleura" has been awaited with great interest not only by those who remembered him as a beloved teacher and friend, but also by all who knew him by repute as a sound clinical observer who had the power of conveying to others what he himself knew. Now that the work is before the profession we do not think that any disappointment will be felt. Much was expected, but in Dr. Fox's *magnum opus* we find even more than we had hoped for. One who was well entitled to speak of the author's mode of work said that "only those who knew him intimately in his mode of writing and of publishing can be aware of the enormous labour he imposed upon himself in order to secure accuracy and fulness ..... His reading of all literature, past and present, that bore upon his subject was wide, deep, and critical; and the pains which he took to verify quotations by one author from another, whether in monograph, contribution to scientific journals, in this country or elsewhere, was beyond all praise." This thoroughness of research is apparent in all Dr. Fox's writings, but nowhere more than in the present volume. An extensive bibliography is given at the end of the book, but this "only comprises the larger monographs and treatises referred to"; on every page are copious references and quotations from other authors, given as foot-notes, so that the reader is in possession of abstracts of everything worth reading which has been written on the subject under consideration.

Dr. Fox's lamented death occurred in 1887, and the manuscript was therefore not up to date. The arduous duties of editing the treatise were entrusted to Dr. Coupland, and it is a matter of general congratulation that the work fell into such competent hands. He has performed his part in a manner meriting the highest commendation. The additions which were necessary have been inserted with most excellent taste, and in so dexterous a manner that the reader is scarcely conscious of any change of authors. To edit a work of this class and this extent (1200 pages) was indeed a great undertaking, but Dr. Coupland will feel that his labours have not been in vain, for he has presented us with the most complete monograph on diseases of the lungs and pleura now extant.

The various diseases are treated in a uniform manner. Each division opens with a definition of the disease. These definitions are singularly full and precise, and by studying them a comprehensive idea of the subject to be discussed is at once obtained. Then follow the history, etiology, morbid anatomy, associated pathology and pathogenesis, symptoms, complications, clinical variations, prognosis, diagnosis, and treatment. Needless to say, each subdivision is dealt with in the thorough and complete manner characteristic of the author. Diseases of the Air-passages, including acute, chronic, and plastic bronchitis, spasmodic asthma, influenza, bronchiectasis, &c., are first considered.

As regards the Pathology of Asthma, Dr. Fox adheres to the views of Cullen and Laennec, that the spasm of asthma depends upon the contractility of the circular muscular fibres of the bronchi, and that it is essentially spasmodic in character. He says: "Although this view has often been disputed, it has remained the prevalent one up to the present day, and is, I believe, the only one by which the phenomena of the disorder can be adequately explained." With this statement we cordially agree.

The chapter on Bronchiectasis is probably the most complete account that has yet been written on this subject. Those who have studied Dr. Fox's "Atlas of the Pathological Anatomy of the Lungs" will have already formed a high opinion of the author as a pathologist of the first rank, and will not be surprised, therefore, when we lay special weight upon the sections treating of pathological conditions. This is well exemplified in this chapter, where the mechanism bringing about the dilatation of the bronchi, and the condition of the tubes themselves, are described in a most masterly manner.

We now pass to the main division of the book, Diseases of the Lungs. One of the first points that will strike the reader is the exhaustive manner in which some subjects are treated which are usually passed over in a few pages. Especially is this the case with Gangrene of the Lungs, to which no less than forty-two pages are allotted. Most interesting also are the chapters on Collapse of the Lungs, Pulmonary Embolism and Thrombosis, and Diseases due to Inhalation of Dust.

Dr. Fox's style of writing is charming, and tempts the reader to linger over the pages, every one of which is full of interest. We would particularly draw attention to the vivid description of the symptoms of pulmonary embolism and thrombosis. The way in which the pathology and pathogenesis of emphysema are described is another example of the detail with which every feature of the disease is worked out.

Those who have consulted Dr. Russell Reynolds' "System of Medicine" will be already familiar with the articles on Pneumonia and Broncho-pneumonia, although for the purposes of this work they have been subjected to a most thorough revision. Although with the development of bacteriology our knowledge of the causes of diseases has greatly increased, Dr. Fox's views as regards the etiology of pneumonia were much the same as are held by most authorities at the present time. He says: "It can hardly be held that acute pneumonia in its ordinary manifestations is a common inflammation; a blood state, either engendered within or without the body, is absolutely necessary to explain its occurrence. Its main characters are those of a general and not of a local disease." Again, after comparing the causation of pneumonia with that of typhoid fever and diphtheria, he says: "To sum up this subject I believe that the evidence at present existing tends to show that pneumonia may arise from miasmatic influences of the pythogenic kind, and that it is very possible that this may be the origin of a large proportion, if not the whole, of the cases of acute primary pneumonia."

We turn to the section on Phthisis with a great deal of interest. It was Dr. Fox's favourite study. Readers of the "Atlas" will know what a complete grasp the author had of his subject, and his clinical knowledge was no less profound than his pathological. The subject of tuberculosis of the lungs occupies over 400 pages, and forms a most complete exposition on phthisis. It was written at a time when most of the German observers were promulgating the idea that inflammatory changes were necessary for the development of tubercle. Dr. Fox taught that the tubercle was primary, and some of his remarks penned before the bacillary doctrine was so firmly founded, show what a wonderful insight he had into the etiology and pathology of the "national disease." Thus he says: "It will be apparent from the account which I have already given of the pathology of phthisis, that I do not accept Niemeyer's views, that I believe it to be essentially one disease,

and that it is of a tubercular nature"—thus at once declaring his firm belief in the unity of the disease. In speaking of caseation he says: "Neither in my own experience nor in the writings of any author unbiased by a special view of tubercle have the lobular pneumonias been shown to undergo caseation or lead to phthisis, except in the presence of tubercle." Referring to the different appearances of "yellow" and "grey" tubercle, Dr. Fox remarks: "The point on which I would insist is that, whether it be regarded as infectious or constitutional, the different appearances of tubercle cannot be classified separately, according to arbitrary histological definitions; it must, I believe, be regarded as a *disease*, and for this disease a distinctive name is desirable."

As above stated, this article was written in the early days of the germ theory of phthisis; but had it been as firmly established as it is now, the author could hardly have written differently, as witness the follow passage: "It may now be very generally accepted that tubercle can be reproduced by inoculation with tubercle, but with tubercle alone." Again, he recognises a second etiological factor, as is now universally admitted: "As a hypothetical question it may be held that, even if tuberculosis depends exclusively on the effect of bacilli introduced into the body, these may owe their power of germination in certain tissues to the weakening of the latter by disease or other causes." He does not uphold the doctrine of phthisis *ab hæmoptoë* as is shown by several of his remarks. The clinical description of the disease is most graphic, and he enters upon a most exhaustive discussion of all the symptoms. In reference to treatment, he would place climatic conditions first in the category of active measures, but he also lays special stress on prophylaxis. "I believe, however, that the most efficient prophylaxis for phthisis in the future, as in the past, will be found in increasing attention to the sanitary condition of dwelling-houses and workshops, though the discovery of unhealthy conditions, masked as they occasionally are, is sometimes even more difficult in the homes of the wealthy than in houses of less size and pretension."

We have not space to enter more fully on a review of this excellent work. We would willingly have discussed the section on Pleurisy and Empyema, which is one of the most important in the book. The amount of labour expended on it has been immense. We would especially draw attention to the careful and detailed study of the question of paracentesis. The advance of surgery has rendered considerable addition necessary to the treatment of empyema, and for this purpose Dr. Coupland has called in the services of Mr. Pearce Gould, whose large experience in the surgery of the chest renders his remarks particularly valuable. We would cordially recommend all those who wish to extend their knowledge of diseases of the chest to consult this volume, for they will find collected in it an enormous amount of information, presented in the most captivating manner. In addition, this treatise will have a special charm for those who knew the esteemed author and listened to his teaching, as the editor remarks in the preface: "No former student of University College and Hospital can peruse this book without its recalling memories of one who was revered as a teacher, admired as an ideal physician, and trusted as a friend; for surely these pages reflect that earnest seeking after truth, with its minute and painstaking scrutiny of every detail, that discriminating judgment and careful analysis, which were his attributes. One can truly say that 'being dead he yet speaketh' through the pages of this book, and his old pupils should know that the opportunity now given for its perusal is owing, in the first place, to the author's widow, and, finally, to his eldest son."

OUR LIBRARY TABLE.

The Medical Register and Directory of the Indian Empire. By JAMES R. WALLACE, M.D. Calcutta: C. J. A. Pritchard.—This compilation supplies an important want to members of the medical profession, not only in India, where perhaps it is most needed, but also in other parts of the United Kingdom. It is founded mainly on the lines of the Medical Directory of this country, but adapted especially to the requirements of India. It is intended to clear the way for systematic regulation of medical practice in India. It will go far to fulfil its purpose, and to the scattered members of the profession in that empire will provide a social bond by affording definite knowledge of one another's existence. The title explains the nature of the contents. The volume is a monumental record of four months' arduous labour, but of a kind which is certainly not unproductive or merely ornamental. The defects, such as they are, will doubtless be obliterated in other editions.

On a New Cysticercus and a New Tapeworm. By T. B. ROSSETER, F.R.M.S.—In the Journal of the Quekett Microscopical Club, Vol. IV., Series 2, page 361, No. 30, January, 1892, Mr. T. B. Rosseter describes a new cysticercus and a new tapeworm. The cystic form he finds in Cypris cinerea; it is oval, invaginated at the anterior portion, and has a long caudal appendage. The cyst is not fenestrated; the hooks around the rostellum of the mature scolex are constant in number—ten,—and lie in an angular position; they are about $\frac{1}{300}$th of an inch in length. There are four oval suckers, each of which is armed with 132 small hooks, arranged symmetrically in rows around the periphery of the sucker and longitudinally in the centre from the apex to base. These hooks are about $\frac{1}{2000}$th of an inch in length. On feeding ducks or drakes (by means of pipettes) with cypridæ containing these new cysticerci, there were developed in the pylorus and part of the duodenum a number of tapeworms about the twentieth of an inch in length. At first sight they appeared most like the tænia lanceolata, but Dr. Blanchard of Paris has come to the conclusion that it must be placed in a new genus, "Echinocotyle"; and he suggests that the special tænia described by Rosseter should be named "echinocotylus Rosseteri."

A Treatise on Practical Anatomy. By HENRY C. BOENNING, M.D., Lecturer on Anatomy and Surgery in the Philadelphia School of Anatomy. Philadelphia and London: Davis. 1891.—We cannot recommend Dr. Boenning's book to English students. It appears to be merely a condensation from other and better text-books. A description of a muscle such as this—"Internal pterygoid; origin, pterygoid fossa; insertion, inner side of angle of inferior maxillary: nerve, inferior maxillary"—will show how little can be learnt from this work, and how scanty is the knowledge conveyed therein, for the other parts of the subject are dismissed in much the same summary style. The illustrations have no more merit than the text, for most of them are reproductions of drawings with which we are quite familiar in some former text-books, and they give us the impression that the blocks from which they have been struck off have now become much worn.

Merck's Bulletin.—With the commencement of its fifth volume the size and the scope of Merck's Bulletin have been very considerably altered. The familiar tinted pages have given way to larger white pages, and the length and the style of the contents have further undergone modification, room being now found for much new material in an unabbreviated form. The profusion of notes of exclamation, which so often distracted attention in the past, seems to have largely vanished before the magic wand of the new editor, Dr. W. H. Porter, of New York. The present aim is ambitious; it is hoped to attract original

communications dealing with pharmaceutical chemistry and the physiological actions and therapeutic uses of both new and old remedies, while another section will be devoted to clinical papers in which the practical and chemical side of therapeutics will be discussed. New remedies, formulas, practical hints, and miscellaneous clippings will be represented as hitherto. A section will be devoted to medical dietetics and another to monographs upon "interesting drugs which are attracting the special attention of the medical profession." Many of the original articles in the first number are of great interest—notably that by the editor upon some new observations on the physiological action of the mercurials and iodides. Ichthyol is the subject of very extended notice, monographs from numerous sources being quoted in its interest. The new venture seems well worthy of support, but we hope that in future it will not be found necessary to print "trade announcements" on the same pages with the text.

The Journal of Physiology. Vol. XIII., Nos. 1 and 2. Edited by MICHAEL FOSTER, M.D. The Engraving Company, Cambridge.—The contents of this part are: 1. Warren P. Lombard: Some of the Influences which affect the Power of Voluntary Muscular Contractions, with two plates. 2. E. N. Stewart: The Influence of Temperature and of Endocardiac Pressure on the Heart, and particularly on the Action of the Vagus and Cardiac Sympathetic Nerves, with two plates. 3. W. B. Hardy: the Blood-corpuscles of the Crustacea, together with a suggestion as to the Origin of the Crustacean Fibrin Ferment, with a plate.

The Quarterly Journal of Microscopical Science. Edited by Professors LANKESTER, KLEIN, SEDGWICK, and MILNES MARSHALL. Vol. XXXIII., Part 2. January, 1892. London: J. & A. Churchill.—This part contains six communications. 1. On Onchnesoma, by Arthur E. Shipley, with one plate. The Onchnesoma is one of the Zephyrea. 2. Note on a Sieve-like Membrane across the Oscula of a species of Leucosolenia, with some observations on the Histology of the Sponge, by E. A. Minchin, with two plates. 3. The Development of the Oviduct in the Frog, by Ernest MacBride, with two plates. 4. On the Nauplius Eye persisting in some Decapods, by Margaret Robinson, with a plate. 5. On two Acanthodriloid Worms from New Zealand, by Blaxland Benham, with two plates. Lastly, an article on the new genus of Synascidians from Japan, by Asajiro Oka and Arthur Willey, with two plates.

New Inventions.

NEW GLASS DRAINAGE-TUBES.

THESE are made of glass of such soft consistence that they will readily admit of being bent by the surgeon or assistant into any shape required merely by the aid of an ordinary spirit lamp or Bunsen burner. The tube being held in the flame until well heated, is easily and quickly manipulated into the desired shape; it will rapidly cool of itself down to the temperature of the body. Being absolutely smooth throughout, and having a gently bevelled distal end, any irritation, whether that of insertion, removal, or *in situ*, is reduced to a minimum, and excretion is rendered much more expeditious. Granulations are also not so liable to be injured as they are by the indiarubber tubes, which have less perforations than those under notice. Thus, while ever remaining patent, they collect the discharge from all parts. The perforations themselves, having perfectly smooth rounded edges, neither offer the resistance to the flow nor the injury to granulations that the perforations of the indiarubber tubes are so apt to do. They are provided with a substantial shoulder at the proximal end, designed to prevent them from slipping in beyond reach, and favouring facile manipulation by fingers or forceps, as well as obviating the necessity for any particular fixing scheme, judicious bandaging being all that is required. The tubes should be turned round while heating, so that the whole circumference may be influenced equally. They should be well heated, and but little force applied in bending. The tubes, which have been devised by Mr. Haydn Brown, are made in all sizes by Alexander Kemp and Sons, glass blowers, Edinburgh.

A TRUSS FOR WORKERS.

MR. W. YEATMAN WARRINGTON of Wolverhampton has forwarded to us a truss for inguinal hernia, now used generally by men who work at the furnaces &c. in great heat in the iron-works. He writes: "There is nothing especially new about it, but it is most effectual, does not chafe the skin, and has no spring to corrode by sweating. It lasts as long as three of the ordinary trusses with a steel spring." There must be many members of the profession to whose patients a cheap, reliable, lasting truss would be of service.

THE ROYAL BRITISH NURSES' ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—I desire to thank you for the kind and powerful support which you have always given to the Royal British Nurses' Association, and would ask you to accord me space in your widely-read columns to lay its case once more, very briefly, before your readers. It was founded just four years ago, in order to unite trained nurses for their mutual aid, and so increase their efficiency and usefulness to medical men and the public. It has already been approved and joined by a considerable number of the leading members of the medical profession in this country, and by more than 3000 nurses. It has instituted, and is successfully carrying on, several important schemes to assist its members in their work and in times of adversity, sickness, and old age. Through the efforts of its members in South Africa, a system of Government registration of nurses became law last year throughout the Cape Colony, while in other parts of the British Empire similar legislation is now being sought for. In this country, I need scarcely remind your readers, any woman, even if destitute of knowledge or of character, can term herself a trained nurse. Hospital certificates can be and have been forged or stolen, and by such means unworthy persons can obtain and have obtained positions of great trust, while genuine hospital certificates, once given, cannot be recalled or cancelled, even though the recipient in after years may give way to habits which render her unworthy of trust, or even commits grave offences against the law. And so it is, unhappily, undeniable that such persons obtain employment, bring danger to the sick and discredit on the nursing vocation and on all their fellow-workers. To remedy these grave evils, it was proposed by the Association that trained and duly qualified nurses should be enrolled on a general register to be published annually, and that the names of anyone who might prove to be untrustworthy should be removed from this list. At a cost of great time and trouble, and of about £800, the Association has commenced this work *as a voluntary measure* by publishing a Register, showing the names and addresses of some 1800 nurses, with the places and length of hospital training which each has received. I now venture to appeal to medical men, to whom nurses already owe so much, and who are so deeply interested in securing good nurses, to become members of the Association, and give it their assistance and advice. The by-laws and all other information can be at once obtained upon application to the Secretary, 8, Oxford-circus-avenue, Oxford-street, W.

I am, Sirs, your obedient servant,

HELENA,
President of the Royal British Nurses' Association.
Cumberland Lodge, Windsor, March 15th, 1892.

THE LANCET.

LONDON: SATURDAY, MARCH 19, 1892.

THE newly elected London County Council held its first meeting on Tuesday last, and its committees will shortly be at work, and will doubtless, in view of the recent decision of the electors, continue the policy which was pursued by the recently expired Council. This policy, so far as public health administration is concerned, has been one of unceasing activity, guided by a desire to use to the utmost the powers vested in the Council for the removal of unhealthy conditions from London. We may briefly review the work of the Council in this direction since it first came into existence.

The Council in its early days appointed a medical officer of health, and without loss of time addressed to the several sanitary authorities a circular letter asking for information as to the insanitary areas within their respective districts. This letter evidently met with a ready response, and from that moment the small staff at the disposal of the Council must have been severely taxed, for we learn from the annual statement of the Chairman, Sir JOHN LUBBOCK, that the Housing of the Working Classes Committee had under consideration as many as 200 insanitary areas. Until the end of the year 1890 the Council had, however, no powers other than those under CROSS'S Acts for dealing with this subject, and as a result it could not do more than urge upon the sanitary authorities the desirability of enforcing as far as practicable the provisions of TORRENS' and the Nuisance Removal Acts. Much difficulty had been experienced in working both CROSS'S and TORRENS' Acts, and the first business of the Council was therefore to propose those amendments in the law which were necessary for immediate purposes, and to point out the urgent need for opportunity to be given for dealing with small areas which were not of sufficient extent for the purposes of CROSS'S Acts and were yet unsuited for the application of TORRENS' Acts. The Housing of the Working Classes Act, which received the Royal assent during the latter part of the year 1890, supplied this deficiency and placed the Council in a position to undertake more seriously the work it had already begun.

Under this Act many hundreds of houses actually unfit for human habitation have been closed by the orders of magistrates, and the Council and the district authorities have been confronted with the difficult question whether areas which needed complete clearance should be dealt with under Part I. at the expense of the Council, or Part II., either at the expense of the district authority or at the cost of both. The Act provided that the Secretary of State should arbitrate when this point was in dispute, and the Council at once made the necessary appeal in respect of five areas, two in Shoreditch and three in the district of St. George the Martyr, which had been represented to it under CROSS'S Acts. In each case the Home Secretary, after holding a local inquiry, decided that the Council should bear but part of the expense, and the district authorities were required to effect the improvements and the Council to contribute one-half of the cost of improving the first two areas, and one-third of the cost of improving the last three. Schemes were therefore prepared by the Vestry of St. George's for the improvement of two of the areas in its district, and the Local Government Board held an inquiry last week with a view to determine whether the schemes should be approved.

In numerous other instances steps have been taken for carrying out improvement schemes in various parts of the metropolis, and these earlier negotiations between the Council and the district authorities may be expected very shortly to bear fruit. In one instance the Council decided, after communication with the sanitary authority, itself to carry out an improvement scheme under Part II. of the Act, and the local inquiry ordered by the Local Government Board in respect of this (the Brookes Market Holborn Scheme) was held a few weeks ago.

The Council has as yet prepared only one large scheme under Part I. of this Act. The neighbourhood of Old Nichol-street, Bethnal-green, had long been known as a metropolitan sore. The insanitary circumstances of this locality were clearly brought to light during an inquiry held by order of the Home Secretary some five years ago, and to those who knew this part of London well it was evident that no incomplete method of dealing with it would prove satisfactory. The Council therefore resolved, after representations by the medical officers of health of the districts of Bethnal-green and Shoreditch, to effect this improvement, and prepared a scheme which for comprehensiveness proved that the Council was not disposed to exercise in any feeble way the powers with which Parliament had endowed it. It is a somewhat curious commentary upon health administration in London that the action of the Council in this matter did not in any way give universal satisfaction. One section of the lay press particularly failed to see that the mere closing and repair of houses, assuming this method could have been universally applied to all the houses in this area, would not have brought out the rearrangement of buildings which was necessary. It was evidently not understood that owing to the ownership of these premises being vested in many persons, no other action was possible than that adopted by the Council, and that nothing but the purchase of the property by the metropolitan authority would enable the improvements to be effected which were so urgently needed. The Housing of the Working Classes Act of 1890 had, moreover, provided more favourable terms for a local authority purchasing insanitary property under these circumstances, and it was very necessary that experience should be gained in the shortest time of the usefulness of the new measure. It may be expected that this scheme will give ample opportunity for this purpose, and the future action of the Council may to some extent depend upon the results of this large undertaking.

So far therefore in the year and a half which has elapsed since the Council obtained its powers under the Housing of the Working Classes Act, the important work of steadily

improving London has been undertaken, and we sincerely trust that it may be continued until the worst of the London slums have been finally removed.

THE settlement of the action "STEELE *v.* SAVORY" has proved advantageous to the cause of progress at the Royal College of Surgeons of England. It has removed an obstacle which blocked the path of reform. It has established the validity of the Charter and By-laws, and thereby terminated a condition of uncertainty which led to developments not calculated to conciliate the governing body of the College. It has diffused a glow of quiet satisfaction through the breasts of the members of the Council of the College, and has disposed them to seek peace by conciliatory measures. It has opened out to the Fellows of the College a prospect of early improvement in their status and constitutional importance which will ultimately prove beneficial to the Members, and it has now resulted in the Council of the College proclaiming an amnesty for the thirty-one Members of the College who had the courage or temerity to infringe Section xvii. of the By-laws in February, 1889. The exact situation of affairs is readily grasped on perusing the minutes of the proceedings of the Council on March 10th. In our article on March 5th we mentioned that on Feb. 11th the Council of the College had deferred the consideration of the infraction of By-law xvii. till March 10th, and resolved to inform those concerned in this infraction of the intention of the Council. The intimation of this intention was conveyed to them in a letter from the Secretary of the College, with the result that a large majority responded to the letter, and generally in a manner which satisfied the President and Vice-Presidents to whom the documents were in the first instance submitted. A few did not reply, but the doctrine of supererogation appears to have been adopted by the representatives of the Council and the fund of merit formed by the contents of the approved letters was sufficient to allow of a dividend in favour of those Members who had perhaps been influenced by the proverb that "speech is silvern, but silence is golden," or had been deterred by some hidden fears from even acknowledging the receipt of the Secretary's letter. However this may be, any intention which may have existed to vindicate further the authority of the Council and the By-laws was abandoned, and the Council adopted unanimously the following resolution: "That the Council, after full consideration of the infraction of Section xvii. of the By-laws by certain Members of the College who took part in the attempt to convene an illegal meeting, hereby determine to take no further action in the matter." This decision will, we think, meet with very general approval. Had the Council drawn a distinction between those who acknowledged their mistake and expressed regret and those who declined to do so, it might very probably have drifted into the ludicrous position voluntarily assumed by that celebrated official DOGBERRY, when charging the watchman to "comprehend all vagrom men" and "to bid any man stand in the prince's name":—

Watchman: How if he will not stand?

Dogberry: Why then, take no note of him but let him go; and presently call the rest of the watch together, and thank God you are rid of a knave.

As it is, the Council has as much reason to be grateful to the majority of the thirty-one Members for replying so courteously to the Secretary's letter as those Members have for the act of grace which the Council has unanimously passed.

The termination of a struggle which has dragged its slow length along for more than three years has reopened the questions of constitutional reform which had been suspended by the action of the Members against the Council. It could not well be expected that, under the circumstances, the claims of the Members of the College to a voice in the management would have in any wise been recognised by the Council after frequent denials of such claims and the repetition of the opinion that they ought to be allowed to rest. The Council is not like Archbishop CRANMER, of whom it was said, "Do my Lord of Canterbury a shrewd turn and he will be your friend ever after." Even if the Council were convinced of the propriety of making concessions to the Members, human nature might stand in the way for a time; but, so far as we can judge, there are only a few of the Council who are prepared for any concession, and possibly all of these few would not have the courage of their opinions and face the opposition with which they would be met. The time of the Members has not yet come in the Council, but with the Fellows it is different. The Council has acknowledged their claims to be consulted, and is probably anxious to meet their wishes. At all events, it has lost no time in redeeming its implied pledge to take the case of the Fellows into consideration as soon as the action STEELE *v.* SAVORY was settled. Sir W. SAVORY, who was one of the members of the Council who met the deputation from the Association of Fellows in October, 1890, moved at the last meeting of the Council on March 10th: "That a committee be appointed to consider and report to the Council whether any, and if so what, further advantages can be extended to the Fellows." This proposition was seconded by Mr. MACNAMARA, and unanimously accepted. Thereupon Mr. WILLETT moved, and Mr. RIVINGTON seconded, a resolution to the effect that it is desirable to celebrate in some suitable manner the fiftieth anniversary of the institution of the Fellowship (the Charter creating this order being dated Sept. 14th, 1843), and that it be referred to the committee appointed under the preceding resolution to report on the best means of giving effect to this resolution. This proposal also was carried unanimously, and the committee appointed consisted of the President and two Vice-Presidents *ex officio*, Sir W. SAVORY, Bart., Messrs. CADGE, MACNAMARA, WILLETT, and RIVINGTON. As this committee comprises three members who belong to the Fellows' Association, there seems every prospect that the main principles for which the Association has been contending will soon receive official recognition. It must, however, be borne in mind that the cup may be dashed from the lip even in the very moment of triumph; and it will be as well for the Committee of the Fellows' Association to be ready to strengthen the case of the Fellows at a moment's notice. It is not difficult to suggest all kinds of technical difficulties in carrying out the simplest concession to the Fellows. What hindrances may not be conjured up to the provision of a common room

at the College, and how many more to consultation of the Fellows, and how many more again to the simplification of voting by voting papers and the election of the President by the Fellows! How easy is the utterance of *non possumus*, but everything that the Fellows desire will be possible if, like NAPOLEON, they decline to admit the existence of the word "impossible."

THE announcement made by Mr. RITCHIE in the House of Commons on Monday, the 14th inst., in regard to the new Royal Commission on Metropolitan Water-supply, is satisfactory in two respects. The scope of the inquiry is clearly defined, and, although it is not necessary to quote the instructions in full, our readers will see that the points referred to the Commission are precisely those which have been so often urged by ourselves. Before further legislation can be attempted it is necessary to know, first, whether the present sources of supply are sufficient for the requirements of London for some years to come; secondly, whether with scrupulous care the quality of this water-supply may be rendered safe even in times of epidemic; thirdly, whether increased demands on the other waters of the Thames and Lea will inflict injury on suburban districts; and, fourthly, if a distant source of supply is found to be necessary whether such supply can be obtained without injustice to provincial towns and centres.

The Commission appears, on the whole, to have been wisely chosen. In addition to two or three experienced officials, it includes the names of three well-known engineers, of Sir A. GEIKIE as a geologist, and of Professor DEWAR as a chemist. No exception can be taken to any of these gentlemen, and our only regret is that no trained bacteriologist is included.

That this is not the first inquiry of the kind is probably known to everyone, but no one who has not made a special study of the subject can have any idea of the enormous amount of research that has been devoted to it or of the mountain of Blue-books in which previous researches have been collected and fossilised. The history of the London water-supply, the complaints, inquiries, laws, and proposals in regard to it would, if told in detail, fill a large book, and the new Commissioners, instead of starting with a *tabula rasa*, will be embarrassed by the great mass of material they have to sift. A short and most imperfect sketch of the evidence already collected is all that is at present possible, but it will not be without interest, considering the magnitude of the question.

In the year 1581 PETER MORRYS, a Dutchman, obtained permission to supply a portion of London from the Thames by means of a water-wheel under one of the arches of London-bridge worked by pumps set in motion by the tide. For about 200 years a considerable supply was obtained in this way. Complaints, however, naturally arose in regard to such water, although there were then no drains to pollute the river with sewage, and accordingly in 1609 Sir HUGH MYDDELTON, with the assistance of a grant from King JAMES I., completed the great work which had previously been beyond his means, and the New River was opened to London. It need not be said that it has been a priceless boon to the metropolis. In 1691 the York Buildings Waterworks Company took water from the river near Charing-cross. This company was transferred to the New River Company in 1818, and the works were shortly afterwards abandoned. Following by a long interval the New River Company, the Chelsea Waterworks Company was started in 1723, and the Lambeth Company in 1785. The other London companies date from the earlier part of the present century. There are now eight water companies supplying London, of whom five draw their water exclusively from the Thames above Hampton, while two depend in part on the river Lea, and the last, the Kent Company, on deep chalk wells to the south of the Thames.

It is not surprising that, even in pre-sanitary times, complaints were made of water drawn and supplied without filtration from the tidal portions of the river. A Committee of the House of Commons sat in 1821; it, however, did nothing, and the complaints increased, and in 1828 another Committee of the House appointed the well-known Mr. TELFORD to inquire and report. The report was presented in 1834. Mr. TELFORD'S recommendations were impracticable, and then two more committees inquired but did nothing. In the meantime, in 1832, the cholera appeared in England. There was nothing to connect it with water-supply or drainage, and therefore its dread lesson was not learnt; but in 1849 another terrific visitation of cholera occurred. The deaths in 1832 are roughly estimated at about 5000, equal to 31·4 to 10,000 of the population. In 1849 the deaths amounted to 14,137, or 61·8 out of 10,000 people. By this time much human sewage went into the river, and so, unfiltered, into a portion of the water-supply, and subsequent investigations showed that the cholera explosion coincided pretty closely with the area of impure water-supply. Omitting several important inquiries, some of them instituted by the General Board of Health, which had recently been established, we come to 1852, when the Metropolis Water Act, which is still in force, was passed. This most valuable Act prohibited the companies from drawing any water from below Teddington Lock, and enforced filtration and the use of covered reservoirs. Shortly afterwards Dr. SNOW propounded the theory of water-carriage, which, although at first regarded as visionary, was by subsequent and bitter experience raised to the rank of a great sanitary law. In 1854 the cholera, to which sanitation is so deeply indebted, came once more, and 10,758 persons died in London, equal to 42·9 per 10,000. The water was better and the mortality less.

In 1866 the last, and we may hope the final, visitation of cholera took place. Thanks to Dr. SNOW and others the dangers of water pollution are now well recognised. The water-supply of London was far better, and the deaths in London, in spite of the greatly increased population, amounted to 5596 or 18·4 per 10,000. Of these a very large proportion occurred in an East-end district which was supplied for a time with water polluted by cholera poison.

The newly appointed Royal Commission, over which Lord BALFOUR of Burleigh is to preside, will be the fourth Commission of the kind, for we must exclude those bearing on the closely cognate subject of sewage disposal. The first was appointed in 1865. It issued three reports with important appendices, the last in 1867. It is known

as the first Rivers Pollution Commission, and its three double volumes deal with the Thames, the Lea, and the Aire and Calder. This was succeeded in 1868 by the second Rivers Pollution Commission, of which Dr. E FRANKLAND was the presiding intelligence. The members of this Commission continued and greatly extended the work of their predecessors. They published six reports with many appendices, including maps and plans; the last, and much the most important, was the well-known Sixth Report, which appeared in 1874, in the form of a Blue-book containing 525 pages. This may be taken as the last public utterance on the great question. It is a monument of careful scientific study and reasoning. In 1867, a year before the appointment of the Second Rivers Pollution Commission, a Royal Commission on Water-supply was appointed under the presidency of the Duke of RICHMOND. Unfortunately, no chemist was nominated on this Commission, and the value of the conclusions arrived at are somewhat impaired by the omission. The report of this Commission, with two valuable appendices, appeared in 1869.

We must leave untold much that will be of vital importance in the labours of the new Commission. The Rivers Pollution Commissioners and the Commissioners on Water-supply differ diametrically from one another in their conclusions. Many schemes for future water-supply, some highly interesting, some absurd, were brought before each Commission and must now be reconsidered. Finally, bacteriology in its relation to disease has developed so rapidly in the last few years that it may almost be said to have been unknown in 1874, when the last great Blue-book was published.

MR F. W. LOWNDES, surgeon to the Liverpool police, has published in pamphlet form a paper[1] which he recently read at the Medical Institute of Liverpool, in which he sets forth from a medical standpoint some of the reasons why the office of coroner could better be filled by a member of the medical profession than by a solicitor or a barrister. There is much force in many of his arguments on the subject of this curious "survival of mediævalism," in respect of which "a general opinion prevails that much more security than exists for the election of suitable officials is needed." In ancient times the coroner was not thought to require special knowledge of either law or physic. He was a knight of the shire, who was "required to go upon information to the places where any be slain or suddenly dead, or wounded, and to summon four or five or six persons to aid him in inquiring when, and where, and how the deceased came to his or her death." Mr. LAWSON TAIT pointed out quite recently that the coroner's function as it exists now is "purely one of inquiry, the theory of which is that the inquiry shall be directed in all cases of death where the method of death is not clearly satisfactory." And *The Times* in like manner observes that "the operation of disease may be mysterious, or there may be reason to suspect violence. As soon as the coroner's court has ascertained the manner in which the fatal result was reached, its business is at an end." Mr. LOWNDES devotes himself to the question whether, in elucidating the mysteries of disease or the probabilities of violence, a knowledge of the laws which govern disease and health, and an intimacy with the modes of death, should not be the first essentials for adequate enlightenment. On the other hand, he asks whether familiarity with legal phrases and modes of detailing evidence should have the most weight, and if medical knowledge should be viewed as of secondary importance to an exact solution in a matter so restricted. Vague generalities, such as "found dead," "excessive drinking," "natural causes," and other equally unsatisfactory proofs of inability to state the true cause of death, need not entail much knowledge at all, either legal or medical; but neither can they be held to give an adequate verdict of the cause of death, which is the primary function of the court. He suggests that if every legal coroner had associated with him a medical assessor whom he would be bound to consult in every case where a discretionary power had to be exercised, the result would be different. Records of inquests held before the period of medical coroners are full of astonishing results arising from ignorance of the simplest medical facts on the part of coroners. In many a clear case of poisoning a verdict has been brought in and accepted by the coroner certifying that the deceased had "died by the visitation of GOD." From time to time incidents occurred which moved the tardy wheels of the Legislature in regard to this office, but the remedies were generally of a "meagre, miserable, and worthless character." The lack of medical evidence was deplorable, and the question of these "useless, expensive, and pernicious exhibitions" becoming one of national importance, a Select Committee of the House of Commons was appointed to inquire into the functions of the coroner. If it is urged that matters have become more satisfactory with advancing years, it is only necessary to refer to recent correspondence on the whole question.

Apart from these aspects of the subject, Mr. LOWNDES maintains that a medical man can administer the oath just as well as a barrister or solicitor, and looks upon the proceeding of "viewing the body" undertaken by persons who have had no previous medical training as a "farce." The object of this procedure is to obtain identification upon oath, and the due registration of all details, the latter especially when identification is impossible. The Bill to amend the Coroners Act of 1887, which Sir WALTER FOSTER has laid before Parliament, aims at dispossessing the jury of the function of viewing the body on which the inquest is to be held, unless the coroner or a majority of the jury should regard that procedure as essential. It may be readily questioned whether in the case of legal coroners their discretionary powers should be extended in this direction. Then there is the question whether a legal coroner is competent to decide the purely medical question of cause, in cases of sudden death, or of uncertified death, especially in those brought to his notice, but in which no inquest has, according to the exercise of his discretion, been deemed necessary. The ability of the medical coroner to obtain and deal with evidence has been frequently disputed by the members of the legal profession. Mr. LOWNDES answers the objection by remarking: "After

[1] "Reasons why the office of Coroner should be held by a Member of the Medical Profession," by F. W. Lowndes, M.R.C.S.Eng., surgeon to the Liverpool police.

years of medical practice, taking the evidence of witnesses in the Coroner's Court would be a very simple matter indeed." But, after all, it is necessary to grasp intelligently the meaning of evidence before it can be sifted. The medical witnesses are often embarrassed in giving evidence by having, as it were, to explain to the legal coroner the use of medical terms. Numberless instances of misconception might be recorded from the published reports of coroners' inquests. Dr. BENJAMIN WARD RICHARDSON refers to this. "For seven or eight years," he says, "I had much practice of this kind. There was at that time one of the most remarkable men in London as coroner for this district (the Central Middlesex)—Mr. WAKLEY,—a man of intense earnestness, force of character, indomitable courage, and sound freedom of expression in the views which he took. He was a medical coroner, and I remember well how very different a matter it was to give evidence before him compared with giving it before a coroner who knew nothing about medicine. It was simply impossible to make a mistake before Mr. WAKLEY, for there he was, ever ready to test the truth down to the bottom. If it came to be a question of chemistry, anatomy, or pathology Mr. WAKLEY was ready. The result was that never have the public interests been so well served as from the time when Mr WAKLEY as a coroner took them in hand. It is natural that a witness should be more exact if he goes before a man who is a competent judge than if he goes before one who has no knowledge of the subject beyond the rest of the community."

Indeed, a great part of the lifework of the founder of THE LANCET was directed to effect reforms in the Coroner's Court which he held to be of supreme importance to the public interests. In the discharge of his duties he never failed to exercise his opportunities either as a coroner or as a Member of Parliament for the public benefit, and we notice that Mr. LOWNDES characterises as absurd the contention of those who consider that coroners and their inquests are superfluous, and should be ended instead of mended. In the hands of duly qualified coroners, that Court has been productive of much influence for good. To take only one example, the abolition of flogging in the army, and subsequently in the navy, can be traced back directly to vigorous action taken in the Coroner's Court. It cannot be too often reiterated that the abolition of this barbarity was due to the courage of the first medical coroner, already referred to, who, in spite of the most strenuous efforts made against him, fearlessly and determinedly overcame every obstacle, and exposed to the public in all its cruel reality the story of the unfortunate soldier who had been flogged to death at Hounslow. It seems to us unfortunate that of the 331 coroners in England only fifty-one have any medical qualification. The curiosities in the way of verdicts arising out of this condition of things are supplied by some 247 coroners having merely legal qualifications, and it has been for the last seventy years our frequently expressed opinion that the anomalies, too apparent and frequent in connexion with coroners' inquests, might to an enormous extent be prevented if purely legal knowledge were replaced by medical knowledge, and technicalities and subtleties gave place to accurate and intelligent comprehension of observed fact. This, however, will not be possible unless for the vacancies which occur suitable medical candidates are forthcoming.

THE Charter of the proposed Gresham University has been remitted by the Government to the Privy Council for reconsideration, and it is understood that this will result in the whole question of a Teaching University for London being again submitted to a Royal Commission. This means a delay of a twelvemonth or more. It is intended that this Commission shall be formed by such of the former Commissioners as choose to again serve on the inquiry, and of some three or four others, so as to make up the number to nine or ten. It seems quite certain that one or more of the former Commissioners will decline to serve, and the name of Lord SELBORNE, the chairman, has been included amongst these. This is much to be regretted, as his lordship is more familiar with the necessities of the higher education in London and of the peculiar position of our medical students than almost any other public man. He not only presided at the sittings of the former Commission, but drew up the main report, and he was also the most active member of the Select Committee of the Privy Council. The questions he put to the various counsel engaged by the numerous bodies interested in the problem amply showed how well versed he was in the subject, and how anxious he was to clear up and arrange the conflicting views put before the Committee. We can well understand that the abandonment by the Government of the judicial decision of the Privy Council drawn up by him and his colleagues is sufficient to cause his retirement from any further action in the matter, but his absence will in every way give cause for regret. The other members of the Royal Commission were Lord HANNEN, Vice-Chancellor Sir JOHN T. BALL, Sir WM. THOMSON (now Lord KELVIN), Sir G. G STOKES, and Mr. J. G WELLDON. Lord SELBORNE, Lord HANNEN, and Vice-Chancellor BALL signed the report urging a reconstitution of the University of London, whilst the inability of that body to carry out such a reform, as was shown by the vote of the graduates in Convocation in May last, was accurately predicted by the three members who had had practical experience in university teaching. We would strongly urge upon the Government, when adding other members to the Commission, not merely the justice, but the absolute necessity, of nominating some member of our profession who is conversant with the needs of London medical education, and who may be relied on to investigate and clearly bring into prominence the disadvantages under which the London medical student is now placed, since the University of London only gives degrees on such onerous conditions as to constitute them really "honours" degrees, as declared by the former Commission. The existence of the Victoria University, and the freedom of its Colleges from the restrictions under which they laboured when affiliated only to the examining University of London, afford the clearest proof that there is a need of, and a precedent for, the establishment of a medical degree to rank between the London degree and an ordinary qualification, with which latter it is not proposed to interfere. The

opposition of the provincial schools of medicine was most ungracious and unwarranted, for the charge of an intention to lower degrees brought against the London teachers of medicine had been expressly and authoritatively refuted by their representatives again and again; but we are sure that another Royal Commission will only make it still more clear that to London medical students must be granted similar facilities for graduation as those existing at Manchester, Edinburgh, or Glasgow. Throughout the whole agitation in the press, at public meetings, and in Parliament the medical side of the question has received too little attention. We doubt whether the University of London, even though it may again make the attempt, can gather under its wing the various University Colleges in the provinces and in Wales, King's and University Colleges, unattached and collegiate students, and the London medical schools and those in the provinces, and mete out equal justice to its past graduates and to the future collegiate student in arts or science, much less in medicine. Its former scheme was the most unwieldy that could have gravely been put forward. The Gresham Charter presented a compact workable scheme, and, under a council composed of the various teachers as well as of the Crown nominees, would have done much to advance and consolidate medical teaching in London. We question very much whether the University of London can do a similar good service, whilst those who look to some great thing being the outcome of the Commission to be presently nominated will probably suffer much disappointment. The "democratic university of the future," and its establishment on a scale worthy of the metropolis, belong to the land where dreams are dreamed rather than to that which is guided by sober aspirations of practical teachers.

Annotations.

"Ne quid nimis."

THE IMPORTATION OF INFECTION BY SHIPPING.

AN important point has been raised by the Health and Sanitary Committees of the Corporation of Liverpool. It relates to the different procedures adopted under our present legislation with regard, on the one hand, to diseases the infection of which is practically endemic with us; and, on the other, to those, like cholera, which we deem to be of foreign origin. Small-pox, imported by vessels into the port of Liverpool, is allowed to spread, the sanitary authority getting little or no knowledge or power over it; and to this is attributed the fact that some forty cases of that disease are now under treatment in the corporation hospital. Then, again, it is pointed out that the distribution of authority in this country is most inconvenient, and calculated to prevent prompt action. Thus, when infection on board a vessel arriving in a port is in question, we have first the customs authorities and their powers; next comes the Privy Council, with their quarantine functions; then the Board of Trade are concerned; and lastly comes the Local Government Board, both as a central authority and as concerned with the administration of the Public Health Act by the local authority. The result is that Liverpool has decided to approach the Local Government Board on the basis of the following resolution:—"That the committee approve of the recommendation of the medical officer of health with reference to the more effective system of inspection of vessels coming into the port of Liverpool, and that the Local Government Board be respectfully requested to obtain such an alteration of the Quarantine Act as would transfer the power of dealing with all infectious disease on shipboard to the Local Government Board, and also to obtain an alteration of the Shipping Act relating to the passengers and the sanitary arrangements on shipboard." It must be admitted that our system for the sanitary control of vessels reaching our ports, and with regard to dealing with different diseases thus coming to our shores, is one that could never be defended if it were set out as a new scheme. It has grown up bit by bit, with increasing knowledge as to the necessity of preventive action; but early its stages preceded the formation of a public health department; and we now have to face the difficulty due to a number of departments dealing with the same or kindred subjects, and several of them clinging with tenacity to functions which they are ill-fitted to perform, but which must before very long be taken from them and amalgamated under one department. Whilst we would, for the present, avoid expressing any opinion as to whether increased powers should be given as to the control of individuals who are merely suspected of being bearers of infections that are current with us, we cordially agree in the main contention which Liverpool has embodied in the above-quoted resolution.

LIFE ASSURANCE AND DEATH CERTIFICATES.

A "Doctor of Medicine," upon whose letter to *The Times* we recently commented, writes us to reassert that he has good ground for saying that "there are members in our profession who would tone down death certificates." He does not, however, adduce any instances of the disgraceful conduct which in general terms he attributes to his professional brethren, and the only passage from experience which he gives us is the fact that he has himself been asked to examine for life assurance a patient who was suffering from cancer of the uterus. Our correspondent very properly refused to make the examination, knowing what he did know as to the condition of the person proposed for assurance, and he is not able to say what happened next. It is not necessary, therefore, to assume that the patient obtained a favourable medical report or a life assurance policy, or that any impropriety was committed by any person in this instance. We have the satisfaction of knowing that one medical man acted exactly as he ought to act in such circumstances, and we do not see any reason for making injurious assumptions about any others. While, therefore, we feel no doubt that a "doctor of medicine" is fully convinced that he has ample reason for the serious charges which he makes against his professional brethren, and while we quite agree with him that such conduct, if practised, should be strongly denounced and even severely punished, we must point out that it is the manifest culpability of such conduct which makes us loth to believe that it prevails in any part of the country. We, of course, do not pretend to believe in the probity and integrity of every man who holds a medical diploma. There are, as the old saying runs, "black sheep in every flock." But the charge, as we understand it, is that medical men in certain parts of the country are accustomed to fill up death certificates in such a way as to lend themselves to fraudulent life assurance. If that be so, the man who exposes the practice will be a public benefactor. But an accusation so terrible can only be made good by evidence precise, verifiable, and convincing. We cannot consent to take our opinions on such a matter at second-hand, even from the best informed and most judicious of our readers. A pseudonym which anybody in the kingdom might have assumed led us at first rather to suspect than

to believe the anonymous author of so odious a charge; and although we have now learnt, from a direct communication, and to our great regret, that the accusation is made by a member of our own profession, and one for whom we entertain a sincere respect, we must still decline, upon the grounds already indicated, to admit that a case has been made out. No man is entitled in such a matter to be judge and witness both. We shall hope that he is mistaken until convinced by evidence of the fact that he is correct.

ETHER AS A STIMULANT AT THE TEMPERANCE HOSPITAL.

IT will be seen that Dr. Ridge, in a letter which we print in another column, refutes the statements of the correspondent of a contemporary (the *Echo*) that ether is used at the Temperance Hospital instead of alcohol. We are much pleased to insert Dr. Ridge's letter, and not sorry that our allusion (which he calls a homily) to the subject has brought forth his reply. Whether our short notice of a serious public statement be a homily or not, his rejoinder certainly partakes of that character, if not of that of an actual sermon. We shall not follow him into all the various medical aspects of the alcohol question. He should know that THE LANCET is not insensible to the responsibility of practitioners who prescribe alcohol, or who give medical sanction to its use. It is a very frequent theme in these columns. We are not prepared to argue that alcohol, like ether in Ireland, should be scheduled as a poison. But we look confidently to the profession to sharply define its medical and dietetic uses, and by such definition to assist in the abatement of our greatest national vice.

ENTERIC FEVER AT TEMPLE CLOUD.

AN outbreak of enteric fever at Temple Cloud in the Clutton rural sanitary district is naturally causing local anxiety, because it is believed to be due to contamination of drinking water. The *Bristol Mercury* has done good service in bringing to light the facts with regard to this matter. One main source of water-supply is an old coal-pit; and such a source is known by experience to be in many instances a suspicious one. Then there are local private wells, some of which are referred to as indifferent in point of quality; and lastly, there is a tributary to the Cam which is also resorted to. The guardians of Clutton are guardians of health as well as of pauperism, and, notwithstanding this, it is stated that in their Poor-law capacity they allow the workhouse to pollute the Cam, which stream they, as a sanitary authority, ought to protect. This special pollution does not seem to have influenced the enteric fever at Temple Cloud; but its existence naturally lessens confidence in the local sanitary administration. Whatever be the cause of enteric fever at Temple Cloud, it is evidently a recurring one, and the least that the sanitary authority should do is at once to call upon their medical officer of health for a report on all the sources of water-supply which are resorted to in the village, together with an account of any means of contamination to which they run risk of being subjected. And if any such sources of contamination cannot with certainty be cut off or otherwise prevented, the authority having the duty of seeing that their district is throughout supplied with a wholesome water-supply should forthwith obtain advice as to an alternative service from an extraneous source. As the matter now stands, the circumstances are wellnigh unintelligible. The medical officer of health has reported on certain drain nuisances, but he significantly adds that the question of water-supply calls very strongly for the immediate attention of the sanitary authority. And yet, when the sanitary committee subsequently meet, they resolve that because the houses having either a deficient or an impure supply belong, with one or two exceptions, to the same owner, the question "does not require any interference on the part of the Parochial Sanitary Committee." What this means it is difficult to determine. Everyone knows that the Public Health Act distinctly refuses to admit that the responsibility of a sanitary authority is ever removed by delegation of duty to a parochial committee; and in the case of Temple Cloud this is fortunate, for this special parochial body is described as "almost defunct." One thing is certain, that the question of ownership of special cottages has nothing to do with the duty of the sanitary authority itself to perform its functions of protecting the public of their district from preventable disease, and of seeing that the inhabitants are provided with a proper water-supply. And it is this that should be definitely pressed upon them either locally or, if this fails, from without.

"VENICE IN LONDON."

IN special reports on the subject we have dwelt at length on the difficulties of warming and ventilating theatres and places of public assembly. It is no easy matter to enjoy an evening's entertainment without being exposed to foul air, overheating, or else violent draughts. For some time, however, Londoners have been able to avail themselves of at least one opportunity of witnessing a magnificent spectacular representation without incurring such inconveniences and risks. At Olympia there is such a vast expanse of space that it would be indeed difficult to befoul the atmosphere. The main building measures 500 ft. in length, 300 ft. in width, and 120 ft. in height, or a cubic capacity of 18,000,000 ft. The hall, it is true, can, it is stated, seat 10,000 persons; but, even in the extraordinary event of every seat being occupied, there would still be close upon two thousand cubic feet of air for each spectator, or about double as much as is generally considered necessary in a hospital. The problem, therefore, at Olympia is not that of giving sufficient air, but of maintaining the temperature of the air at a proper degree of warmth. The space is so great that the impression produced is that of an out-of-door entertainment. This agreeable result has been attained in a measure by warming the water of the canals. What we suppose may be called the lagoon in the main building and the canals in the reproduction of modern Venice present a surface of water measuring altogether a mile and a quarter. The Rosher system of hot piping is laid throughout the canals, and the water is thus warmed; but it took more than a week of continual firing to warm this immense bulk of water. There are altogether three million gallons of water, and, as it is necessarily shallow, the surface of evaporation is correspondingly large. The water, therefore, readily parts with its heat, and thus warms the building; but the process of warming the water has to be actively carried on day and night. The temperature of the water is never allowed to fall. Theoretically it is supposed to be kept at 60° F.; but during the recent extremely cold weather, when outside water was converted into ice, the temperature of the canals at Olympia has fallen as low as 54° F., and has seldom been above 57° F. A warming surface of a mile and a quarter has converted the icy air coming in from the outside into a soft atmosphere, in which the spectator can sit on the terraces of the cafés overlooking the canals, or watch the spectacular representation with ease and comfort, as if it were a summer's day. Here and there, in corners, where they are not readily observed, the hot-air pipes may be found outside the water. They then part with their heat directly to the atmosphere. Olympia, therefore, as a place of entertainment, offers

advantages similar to those of out of door pleasures, without the risk of the exposure to the rigour of our climate. The spectators may walk about or ride in the gondolas, stopping here to listen to the mandolin players or the melodious Italian singers, and there to watch the busy scene on the canals, where close upon a hundred gondolas flit about in every direction. The spectacular representation is one of the most gorgeous displays that has ever been presented to the London public. On the stage, which measures 300 ft. by 450 ft., 1400 persons appear simultaneously, without causing any sort of encumbrance, or in any way interfering with the atmospheric condition of the great hall. The large lake of warmed water between the stage and the spectators, and the distance of 120 ft. from the surface of the water to the roof above, constitutes a vast space where the air vitiated by the performers and the spectators is diluted and mixed with the unused supply. Thus an excellent entertainment can be enjoyed without any of the risks and inconveniences that mar the charm of even some of our best theatres.

A RIGOROUS EXPERIMENT.

INTERESTING and perhaps important in point of utility, an experiment lately carried out in the Russian army must come dangerously near to censure if tried in the light of humanitarian principles. In order to ascertain whether tents would suffice to shelter troops in the field during severe winter weather, eight soldiers chosen at random were, it is stated, made to pass the night, or as much of it as they could endure, under such conditions. Every care seems to have been taken to provide these men with warm and heavy clothing, and the snow within the tent was beaten down and covered with mats and straw. The men slept comfortably from nine in the evening until nearly four next morning, at which hour the thermometer showed that the temperature, originally registered as 31° F., had fallen to 4° below zero, within as well as outside the tent. Nature could then endure no more; sleep was impossible, and the soldiers only saved themselves from freezing by taking exercise in the open air. Everyone can understand the bearing of such observations on practical warfare, and we would not lightly disparage their useful intention. Nevertheless, it is something new to find the human species thus subjected to such an *experimentum in corpore vili*, and we sincerely hope that military necessity will not—as we believe it should not—call for its repetition. The recorded experience of arctic voyagers—who have often camped out in tents—may surely now suffice for evidence as to the amount and quality of clothing and of tent appliances required to withstand the extremes of winter cold.

THE DEBATE ON PHAGOCYTOSIS.

THE debate at the Pathological Society came to a close on Tuesday last, having thus occupied three evenings. It has certainly been of great value, and it says much for the skill with which it has been conducted that the interest in a subject which involves of necessity many points and arguments that are not easily grasped by the uninitiated should have been so well maintained. The paper with which Dr. Ruffer opened last Tuesday's proceedings was well worthy of the subject, and of one who is entitled to be regarded as perhaps the foremost student of phagocytosis in this country. It seemed to leave no debatable point untouched, and dealt in masterly fashion with the criticisms of Dr. Klein and the alternative hypothesis of Buchner and his followers. One great merit of this paper was the care with which its author avoided using the somewhat equivocal phraseology that has sprung up around this subject. There is no such thing, he boldly said, as "immunity" in the absolute sense, and throughout he preferred to speak of animals as being "naturally resistant" or "artificially protected," instead of using the hyperbolic terms that have become current. Phagocytosis, he maintained, is the only process which has been proved to be essential in the production of this resistance or protection, although "neither Metchnikoff nor any of his pupils has ever said that this was the *only* cause of natural or artificial resistance." Mr. Ballance's lucid exposition of the active part played by the fixed tissue cells in inflammation and repair and the subordinate *rôle* of leucocytes led up to the declaration that the former are probably the chief agents in phagocytosis; although the essentially chemical nature of the processes whereby immunity is secured was also pointed out. Mr. Hankin's interesting discovery of a proteid in the spleen of the white rat having bactericidal properties—although discounted by the supporters of the exclusive phagocytosis doctrine—undoubtedly gives strong support to the chemical theory of protection, and his speech was interesting as affording a reply to some of the arguments of Dr. Ruffer. In replying on the whole case, Dr. Sims Woodhead claimed that all the evidence hitherto adduced spoke in favour of phagocytosis being the agency at work in the living body, since the evidence on behalf of the humoralistic doctrine was derived from blood-serum or its products, which probably do not exist as such in the living animal. The summing up of Sir George Humphry was weighty and judicial, and his tribute to English bacteriologists was felt to be well deserved. The debate will, we doubt not, go far towards opening up new paths of research in this extremely interesting question.

RECOVERY OF MEDICAL CHARGES.

IT is always gratifying to report the success of a medical man in an action for recovering his charges. We have lately had occasion to notice the frequency with which such actions are rewarded by success. A case has just been reported in the *Sussex Daily News*, where, on March 8th, Dr. Whitmarsh of Brighton brought a claim against the Rev. J. Moses, rector of Itchingfield, for £25 odd for attendance on the defendant's wife and daughter. Medical particulars were not given. The defence was that the visits were too frequent and were over-charged. The defendant paid twelve guineas into court. The plaintiff, on the contrary, maintained that there was no excess of visits, and that the charges were reasonable. His Honour (Judge Martineau) said that, in regard to the number of visits, one must trust to the honour of the medical man. "If one thought that the doctor was making a job by running up the bill unnecessarily, the sooner one got rid of him the better." The jury found for the full amount, and expressed their belief that all the visits charged for were paid and that the charges were just.

MEDICAL LEGISLATION IN NEW SOUTH WALES.

THE Minister for Justice has introduced to the Legislative Assembly a Bill passed by the Legislative Council in 1890 to regulate the practice of medicine and surgery in New South Wales. The object of the Bill is to secure the registration of all regular practitioners possessing respectable diplomas, including those registered under the Imperial Act of 1886, or possessed of the degrees or diplomas of our examining bodies. The difficulty in such legislation is to deal with persons who have been practising for a certain time in the colony without diplomas. Great care is needed here, or the profession becomes identified with men who are sure to discredit it and to greatly injure the public. The following way of dealing with advertising quacks is somewhat original. The 17th clause is in these terms:—"Any person who shall advertise as treating disease, injury,

or ailment shall state his Christian and surname in full in the advertisement, and shall also place them upon any house or premises to which such advertisement refers, and, if not a medical practitioner, shall also add '*not registered under the Medical Act, 1890*,' in such manner as is prescribed by regulations. Any person who shall violate or neglect to comply with the requirements of this section shall be liable for every such offence, for every day he is guilty thereof, to a fine not exceeding £5; and any person, not being the person whose name appears in any such advertisement, who shall treat disease, injury, or ailment at any house specified in such advertisement, purporting to be the person whose name appears on such house or in such advertisement, shall be liable to a penalty not exceeding £25 for every such offence, and the proof of being such person shall lie on the defendant."

THE ROYAL BRITISH NURSES' ASSOCIATION.

WE publish on another page a letter from H.R.H. Princess Christian respecting this Association and its work which will attract great attention and awaken no small interest throughout the circle of our readers. The manner in which the endeavours of the founders of this society to create an organisation which shall consolidate and represent the profession of nursing in Great Britain have been beset and hampered by an interested opposition on the one hand and official perversity on the other is a very recent story, upon which we have been compelled from time to time to speak in terms other and stronger than we should have desired to use. But the difficulties so created have not daunted the promoters of the movement, who are entitled to the credit of having persevered with exemplary determination in the task to which they have set themselves. On the other hand, it cannot be doubted that the very sharp fire of criticism to which the scheme has been subjected has enabled its framers to perfect its details, as they probably could not have done without this assistance, although the tone and manner of the criticism have absolved them from any oppressive sense of gratitude to their critics. The result of this not too genial coöperation is before our readers in the abstract of the Draft Charter, which we publish on another page. From that abstract it will be seen that H.R.H. the President is supported by a distinguished body of corporators, whose eminence cannot fail to satisfy the Privy Council that the scheme commands the cordial support of at least a fully representative body of medical men and nursing authorities. If it should be necessary to renew at Whitehall the discussion which has been carried on in the press and elsewhere ever since the initiation of the movement, we do not doubt that the promoters, who have had much the best of the argument throughout, will be able to satisfy the committee, which is at least too familiar with legal procedure to adjudicate upon a claim without hearing in its support those who advance it.

THE MEDICAL MISSIONARY.

THE Edinburgh Medical Missionary Society has just celebrated its jubilee, and in the speeches delivered on the occasion the amplest evidence was adduced of the success with which it has been worked, and of the yet greater future in store for it. History repeats itself, and the medical scholar will note the fact that, while the healing art had its first beginnings under the fostering care of the priesthood, it has returned, in one important field of its exercise, to its early alliance with religion. Returned, we say, but with a difference, for while in ancient India and China medicine was made the instrument of a degrading superstition, it has nowadays become in those very regions the handmaid of a civilising faith; the two professions, that of practitioner and preacher, coöperating duly each in its proper sphere, for the rehabilitation of a morally and intellectually impoverished humanity. In the first quarter of the present century religion and medicine had no grander representatives than Dr. Chalmers, on the one hand, and Drs. Abercromby and Alison on the other—the men at whose instance the Edinburgh Medical Missionary Society sprang into life. Every decade that has since elapsed has witnessed an advance both in the theological and the medical qualifications of its votaries, till it attracts to its service young men combining in both capacities a professional efficiency unsurpassed by their home-placed contemporaries in either. Dr. Martyn Clark was able to draw on his great Indian experience in proof of this position, insisting as he did on the necessity of exacting from the medical missionary a standard of excellence in his twofold activity not inferior to that of his single-handed brethren of the Motherland. Already, as the literature of the profession can testify, the resources of the healing art have been enriched by medical missionary labour and experience; while an interesting paper might be written on the peculiar advantages possessed in the field of territorial exploration by pioneers who have combined with the religious impulse the accomplishments and the spirit of the surgeon and physician. Names like those of Mungo Park and Livingstone rise at once to the memory; and among German and Italian explorers of more recent date the twofold coincidence receives yet fuller illustration. At the meeting in Edinburgh on Monday last Mrs. Bishop, herself a traveller of distinction, pointed out the vast field yet to be covered by such societies, whose emissaries are everywhere "the object of love and trust, everywhere offering in themselves the best interpretation of the Christian law of love." Great Britain is the most successful of colonising Powers. The rapid development of her medical missionary societies is the most effective proof that, in the highest of all respects that success is merited, and will be more than maintained.

FAT EMBOLISM.

DR. W. F. WHITNEY contributes a paper on this subject to the *Boston Medical and Surgical Journal*, Feb. 18th, 1892. He relates the case of a man, aged sixty-two, who sustained a fracture of the right femur by the falling of a lift. Nothing unusual was noticed until the middle of the third day, when vomiting commenced, and fluid collected in the abdominal cavity. The patient died on the fourth day. At the necropsy the vessels of the lungs were found to be extensively plugged with fat; the head was not opened, and all the other organs were healthy. Dr. Whitney reviews some of the work which has already been done on the subject. Majendie, in 1827, was the first to prove experimentally that oil injected into the veins of an animal would produce death. But it was not until 1862 that Zenker called attention to the presence of fat in the vessels of the lungs in some cases of death after fracture of the leg, and it then came to be regarded as sufficient to account for the fatal issue. "But gradually, as the infective processes with which it was often associated were better understood, the conviction grew that fat embolism of the lungs alone was not sufficient to produce death, and that its action on centres more remote must be considered. By far the most thorough and exhaustive study was made by Scriba in 1879, and since then but little has been added to our knowledge. The problems which he proposed were: 1. How much fat is required to kill? 2. In what way does it act? 3. How is it eliminated? In answer to the first question he found that in order to kill an animal by fat embolism a quantity is necessary varying with the force with which it is injected and with the distance of the point of injection from the heart. But in

no case was it less than three times the amount of fat contained in the entire femur of the animal. His conclusion as to the mode of action is that death after aseptic fat emboli occurs only from large numbers of them in the brain and spinal cord, and in consequence of the arterial anæmia and the resulting disturbance of nutrition." He further showed that the oil has no action on the heart, and that in regard to the lungs, five-sixths of the arteries must be tied before an animal is killed, and that therefore there is never such a degree of embolism of the lung capillaries that death must result. On the other hand, it is the fat which has passed the lungs and reached the central nervous system that is the cause of death. In answer to the third question, his experiments and clinical evidence point to the kidneys as the organs by which the greater part is eliminated. A smaller part is undoubtedly burned up in the system. Of the symptoms noted, one of the most striking was the constant fall in temperature. Another symptom was dyspnœa, due to the loss of oxidation of the blood; this was often only transitory. Slight hæmoptysis, due to infarction, has also been noticed. The most important clinical symptom of fat embolism is the presence of oil in the urine. Scriba sought this in a number of patients suffering from fractures, and was able in nearly all the cases to demonstrate it to a greater or less degree. The fat could not be recognised as such by the eye alone, but with the microscope there were seen numerous very small, round drops, which were highly refracting, and had a fine dark border. The elimination was not continuous, but interrupted. A marked pallor of the skin and mucous membranes was noticed in all the animals experimented on.

DEATH OF DR. C. MEYMOTT TIDY.

WE regret to have to announce the death of Dr. Charles Meymott Tidy. Dr. Tidy last year suffered from an attack of influenza which left him much impaired in strength, flesh, and colour. He seems never fully to have recovered, and for the last few months he has been much hindered in the discharge of his multifarious duties. He was Professor of Chemistry, Medical Jurisprudence, and Public Health at the London Hospital, the official analyst to the Home Office, and medical officer of health for Islington. He wrote many works on legal medicine, and was the author, conjointly with Dr. Woodman, of a "Handy Book of Forensic Medicine and Toxicology." He had for some time assisted in drawing up the monthly and annual reports on the quality of the water supplied to London. He graduated with the highest honours in Aberdeen University, was a Member of the Royal College of Surgeons, and a Licentiate of the Society of Apothecaries. He was also a barrister at law. His position was due to no accident of birth or education, but was the result of inherent ability and indefatigable work.

THE NOTIFICATION OF MEASLES.

AT a recent meeting of the Public Health Committee of Cork a forcible letter from Mr. Donovan, the superintendent medical officer of health, was read, arguing the unreasonableness of leaving out measles from the list of notifiable diseases under the Notification Act. Mr. Donovan pointed out how much more fatal it is than the diseases whose notification is specified in the Act. Thus in the three years 1886, 1887, and 1888 the deaths from erysipelas, simple fever, and measles were respectively 1, 2, and 159. From the comparative abeyance of measles in recent years, except 1887–8, he estimates a large number of children to be liable to the disease, which is already showing itself in different parts of the city. He is strongly of opinion that the early notification of cases would tend greatly to prevent an epidemic. The absence of measles from the notification list is the more marked as it used to be notified before the Act. These obvious and weighty considerations prevailed with the committee, which, on the motion of Mr. Atkins, took steps to have measles included in the Notification Act. We may expect this course to be followed by all sanitary authorities who are not penny wise and pound foolish. Some authorities are concerned at the fact of having to pay for the notification of measles. At Kidderminster, where the authorities had received notification of ninety-five cases of measles since Feb. 1st, one gentleman complained of the cost as a perfect waste of money. In moving the adoption of the Health Committee's report Mr. Parry complained that they did not receive from some medical men all the help they might expect, and seemed especially displeased with one gentleman who very properly apprised the Committee of a recent decision—Chisholm *v.* Radcliffe Local Board—that medical men notifying cases were entitled to the full fee *without deduction for postage*. It will be unworthy if the authorities show any illiberality towards medical men doing their duty. On the contrary, they should reward early notification by generous admission of its utility, if not by extra pay. They should allow, too, for the difficulties of notification, arising from difficulties of diagnosis, which are felt by all but the ignorant.

THE REPORT ON PERFECT COMBUSTION AND SMOKE PREVENTION.

WE have received a very lengthy communication from Mr. J. Knapton Thompson, C.E., of Leeds, claiming that a portion of the construction of Leggott and Marsh's patent fire-range violates an invention and patent of Mr. J. Knapton Thompson in, as he alleges, two most important particulars. It is obvious that we cannot decide between the rights of the respective parties, nor have we room in our columns for such a discussion. We simply described the fire-range as we found it.

A NEW BOMBAY VACCINATION BILL.

THE *Times of India* contains a very interesting report of a meeting of the Council of the Governor of Bombay for the purpose of hearing the second reading of a Bill to prohibit the practice of inoculation, and to make the vaccination of children in certain parts of the Presidency compulsory. The meeting was addressed at great length by the Hon. Mr. Javerilal W. Yajnik, the Hon. Mr. Rao Bahadoor, Mr. G. Ranade, the Hon. Mr. N. N. Wadia, the Hon. Mr. J. R. Naylor, and others. The second reading was moved by the Right Hon. Sir Charles Pritchard. Vaccination has been compulsory in Bombay since 1877. The purpose of the present Bill is to extend the law to other parts of the Presidency. The discussion was very creditable to the intelligence of the Council, not least to its native members. The chief feature of the Bill is that it enjoins compulsory vaccination with calf lymph whenever the parent or guardian of the child shall so require. Practically all the speakers recognised the benevolence of this law, and agreed to the principle. The only subject on which any material difference arose was contained in certain words in Section 14, giving the Governor in Council power to sanction vaccination with human lymph in cases of emergency and where delay would be dangerous. His Excellency the Governor heard objections stated at great length and certainly with much ability. But finally the Bill was read a second time on the understanding that the time for the statement of such objections was in committee. The objection is based not only on the ground that disease, such as syphilis or leprosy, might be conveyed through vaccination, but that considerations of caste might be offended by vaccination from those of inferior caste. Mr. Naylor spoke with great force in defence of the Bill as

it stands, and made a statement to the following effect: "No case that I have ever heard of in India has been brought forward as a proof that the employment of human lymph is dangerous to the health and life of the child. I have now had pretty nearly thirty years' experience of the Mofussil, and in the course of my duties have come across Indian gentlemen of all classes, and I cannot recall an instance in which I have ever had brought to me a single complaint against the use of human lymph." We commend this statement to anti-vaccinationists at home, and the fact that the principle of compulsory vaccination is recognised by all classes and creeds in Bombay as a law of benevolence and wisdom. We think the Government are right in reserving to themselves power to use human lymph in emergencies. The supply of calf lymph is practically capable of great extension, but in the case of outbreaks in outlying districts it would be absurd to hesitate in the use of arm to-arm vaccination where animal lymph was not at hand. Arm-to-arm vaccination is still practised in England, though there is an increasing disposition to supply the alternative of calf lymph.

THE ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.

EPSOM COLLEGE is an institution not unknown to our readers, and one the claims of which have on many occasions been advocated in these columns. The appeal which we print to-day from the chairman of the Council and other representative officers of the institution brings the matter afresh to the notice of the profession under a new aspect; but the position is by no means hard to understand. The work of the College is twofold. It affords a retreat to a certain number of poor and incapacitated medical men or their widows during the declining years of life. It also provides a first-class education for some 600 boys, among them being foundationers. At present these two departments are carried on under one roof, and the arrangement, not an ideal one at best, has become exceedingly inconvenient by reason chiefly of the growth of the school, which demands more space than is afforded by the accommodation at present assigned to it. Hence the Council propose to send the pensioners home to their friends and convert the premises at present occupied by them to educational purposes. It is, however, impossible to carry out this plan without providing the pensioners with such allowances as will enable them to live elsewhere. The dwelling accommodation which they at present enjoy free of cost is a large part of their allowance, and if this be withdrawn it must be compensated for by an additional pension granted in lieu of it. To provide such additional pensions the Council are appealing for a capital sum of £26,000, in furtherance of which object the Lord Mayor of London has consented to preside at the biennial festival of the College on the 5th proximo. The cause is one which does not need to be supported by eloquent or ingenious pleas; to state the facts is to plead the cause, and we hope that the timely notice of the festival now given will secure a large attendance, in which case we have no doubt that the necessities of the College will evoke a generous response.

ARMY RECRUITING.

LIEUTENANT GENERAL FIELDING, the Inspector General of Recruiting, has just issued his yearly report. He states that the total number of recruits that joined the regular army during 1891 was a little over 36,000. Of these, there were 12,975 specially enlisted, either on account of their not being up to the required standards or because of the regiments selected by them being closed for recruiting. We have not space to go into the details connected with these figures and the inspector-general's remarks as to the medical examination and the chief causes of rejection, nor can we discuss those sections of the report dealing with the waste of the army and the army reserve. As regards the militia, out of 37,487 recruits enlisted only 34,983 were finally approved and came up for preliminary drill. General Fielding's report refers to the depopulation of rural districts and the increase of towns, the comparative failure of Ireland as a recruiting ground, and other things as seriously affecting recruiting. That the returns for each year show a steady decrease of crime of all sorts in the army is a satisfactory and well-known fact. After due consideration of the subject from every point of view, and in face of the necessity to provide over 30,000 recruits during the present year, General Fielding cannot do otherwise than recommend that no change be made in the standards of age, height, weight, or chest expansion, and in the permission to enlist lads of eighteen and upwards who appear likely to develop into efficient soldiers. With the continuance of these regulations he does not apprehend that any well-founded ground for complaint will arise as to the ultimate fitness of most recruits for the career of a soldier.

THE COUNTY COUNCIL.

WE observe with much satisfaction that the London County Council has elected amongst its aldermen Sir John Lubbock, Mr. Beachcroft, and Mr. Hoare. Sir John Lubbock occupies so high a position among thinking men that his association with the London County Council will materially strengthen it. Both Mr. Beachcroft and Mr. Hoare have done excellent work on the Housing of the Working Classes Committee, and it may be anticipated they will take prominent positions on the Public Health Committee which will shortly be constituted.

"ELIMINATION OF MICRO-ORGANISMS BY THE SWEAT."

UNDER the above title a short paper appears in *L'Union Médicale* for March 3rd of this year. It commences by stating that it is still an unsettled question as to whether micro-organisms are able to pass through certain vessels and organs, and then be eliminated by means of the kidneys or intestinal canal, when these organs are in themselves perfectly unaffected and in a healthy condition. According to some authorities, amongst whom is Wyssokowitch, such an event can only occur when there is a sanguineous exudation, or the tissues of the kidneys or intestine are diseased. Some observers, on the other hand, deny that such conditions are necessary. Thus Trambusti and Maffucci maintain that they have found anthrax bacilli in the urine and bile when no disease whatever could be found in the kidneys and liver. Baumgarten, again, states that he has seen tubercle bacilli pass from the blood into the tissues when the walls of the vessels were quite healthy. From other authorities we learn, on well-established evidence, that pathogenic micro-organisms can pass into the milk when the mammary glands are unaffected. Brunner[1] investigated this matter from another side, and demonstrated the fact that pathogenic microbes could be eliminated by means of the sweat. This investigation was met with a great difficulty from the outset—namely, that it was not easy to sterilise the skin so as to be sure that the micro organisms which were found in the secretion, and cultivated in artificial media, were derived from the tissues and fluids of the body, and not from its cutaneous surface. This difficulty was overcome by using animals for experiment which had been inoculated with disease, the pathogenic organism of which could not accidentally have found its way on to the skin. The animal was then made to perspire profusely by artificial means, pilocarpine being usually employed for this purpose, and then

[1] Berlin. Klin. Wochenschrift, May 25th, 1891.

further inoculation and cultivation experiments were made with the sweat. Proceeding in this way, Brunner injected a culture of staphylococcus aureus into a hog, one of anthrax into a cat, and one of micrococcus prodigiosus into a sucking-pig. In all three cases the microbes injected were found in the sweat, and also in the saliva. This is an important discovery, from both practical and theoretical points of view. It gives to crises, accompanied by profuse perspirations, which may be produced artificially or occur naturally, a still more important place than they formerly held. It also demonstrates that there may be great danger in allowing a patient who has been sweating profusely to possibly reabsorb the secretion, and that therefore it is a good plan to employ moderate friction with dry cloths when such a crisis occurs, and to subject all linen and clothing capable of absorbing the sweat to immediate disinfection. Another precaution which the investigation indicates is that when an abscess is discharging externally, or when a patient is suffering from erysipelas or other infectious cutaneous affection, there is great danger to the patient himself if the linen &c. are not changed after profuse sweats, as the micro-organisms may possibly be absorbed by the skin. It is singular, however, that several observers (including Mattei, Surmont, and Lille) have failed, after numerous attempts, to find tubercle bacilli in the sweat of phthisical patients; so numerous have such trials been that we may almost consider it as absolutely proved that such migration of the bacilli does not occur.

A MEDICAL CENTENARIAN.

IN a morning contemporary of the 16th inst. is published the following paragraph: "Mr. William Salmon of Penllyne Court, Glamorganshire, who was born in the parish of Wickham Market, Suffolk, on March 16th, 1790, completes his 102nd year to-day. He is supposed to be the oldest living Freemason, and the oldest member of the Royal College of Surgeons." On reference to the College Calendar we find the name of William Salmon under the date 1809, in which year Thomas Keate was "Master" (there were no "Presidents" in those days). Mr. Salmon was perhaps examined by Everard Home (the first "President" and the brother-in-law and executor of John Hunter), whose name appears in the "Court of Examiners" for 1809. John Hunter died in 1793, so that there is still living a member of the profession who was born before the great surgeon's death the centenary of which is fast approaching. Truly, Mr. Salmon is a most interesting link with past professional history. Would it not be a graceful act on the part of the Council to confer honorary distinction on their venerable "Member"?

THE CLEANSING OF WOOD PAVEMENT.

NO one who has lived in a city during recent years will dispute the fact that wood pavement now in such common use, notwithstanding the comparative ease and quiet it has introduced into the course of traffic, is open to at least one permanent objection. It is, in consequence of its comparatively non absorbent composition, essentially dusty, and the dried mire and refuse of the thoroughfare, not wholly removed by the boys with brush and shovel, is blown here and there, and is a cause of annoyance to the olfactory sense and the air-passages of any persons whose perceptions have not been quite blunted by its repeated irritation. We might speak, too, of possible risks of contagion. Germs in endless variety may be looked for among its particles, and if we are happily not ourselves conscious of their mischievous influence we may attribute this, not to their assumed absence, but rather to personal immunity, or more probably to the attenuating influence of surrounding air and sunlight. If we ask by what means this chronic inconvenience may best be remedied, one principal agent, water, however applied, seems alone to promise an effective result. It has been suggested that the watering cart now in use for this purpose were best superseded by a hose worked often and regularly upon all roadways paved with wood. The suggestion is a good one. It would, however, we fear, prove expensive both as regards the supply of apparatus and of labour. The same end would be served, and probably at a less cost, by supplementing the existing agency of water carts by means of a roller brush like that used in clearing tramway lines. Whatever the method employed, it behoves local authorities to give the matter their early consideration. Should we be favoured with a period of dry, mild weather after the recent snow, frost, and rain, we need have no doubt that March winds will early remind us, whether in town or country, of the discomforts of the dusty highway.

NEURITIS FROM EXPOSURE.

IN the new *International Medical Magazine* Dr. G. W. McCaskey utters a word of warning with regard to the early recognition and treatment of the simpler forms of nerve inflammation. Many of these, he says, are first regarded as cases of rheumatism or neuralgia until a subacute or chronic stage has been reached, at which the condition is very intractable. To assist in making the diagnosis he emphasises the importance of discovering whether there is tenderness in the nerve trunks as well as of attending to the etiological factors in the condition. Amongst these exposure is conspicuous, and continuous pressure is also to be kept in mind as a not uncommon cause. With regard to treatment, absolute rest is insisted upon. Even the hand, if the arm is affected, must be rendered immobile, and the limb should be placed in the posture which exposes the nerve trunks to least tension. The free use of hot compresses to the limb is also recommended, but in the early stage the beneficial effects of electricity in any form are somewhat doubtful. A compress, however, as hot as it can be borne, usually secures marked relief from pain, and allows morphia to be for the most part dispensed with; and after the acute symptoms have subsided the use of a weak galvanic current—whether ascending or descending is of little consequence—is strongly recommended.

THE VENTILATION OF COW BYRES AND TUBERCLE.

ANYTHING bearing upon public health which comes from the pen of Dr. J. B. Russell is always worth careful perusal, but he has seldom set forth more important considerations than those which he has included in a memorandum in which he points to the need of some modification in the existing system for the licensing of cow-byres in Glasgow; his object being to secure that such questions as the ventilation and the cubic capacity to be required in cowsheds shall be controlled by the sanitary authority. Throughout he holds in view the danger which the public run of contracting tuberculosis through the agency of cow's milk, and in considering, in the first instance, the necessity for maintaining the health of the cows themselves, he quotes Professor MacFadyean to the effect that "there is not a single known fact in connexion with physiology to lead us to believe that those animals are any more resistant to the prejudicial influence of the effete matters they add to the atmosphere than human beings are." He then recalls the fact that the Army Regulations require 1600 cubic feet for each horse, and that in the army horse-infirmaries 1900 are insisted on; and he again quotes Professor MacFadyean, who says that "probably a suitable cubic capacity would be, for a cow or other full-grown bovine, 1200 cubic feet." But when we come to compare

horses and milch cows, we must remember that the health of man is directly concerned in the latter, whereas the health of horses has no such bearing. And, further, the horse is not exposed to any such exhausting process as an artificially induced excessive lactation, so that whatever is needed to maintain a horse in reasonable health can hardly be deemed excessive in the case of a cow supplying milk for human consumption. Having regard to all these considerations, it is somewhat startling to find that in Glasgow the prescribed space for the town-stalled cow is only 400 cubic feet, that in Kilmarnock the same has hitherto been allowed, and that in Oldham as few as 350 cubic feet have been sanctioned. Kilmarnock now makes a slight advance to 500 and Oldham to 600 cubic feet. The majority of towns from which information could be obtained require some 800 cubic feet, and the Local Government Board have also advocated that as a minimum standard. According to recent experience, such a standard cannot be regarded as excessive; and, if health alone had to be considered, it must necessarily be regarded as falling short of that which ought to be provided in the case of milch cows, whether in town or in country places. The main objection raised against a healthy standard has been the contention that warmth is necessary to maintain the flow of milk. But, as Dr. Russell asks, is this warmth to be the heat of the cow herself, preserved by enclosing her in an atmosphere loaded with impurities from her own pulmonary, cutaneous, and intestinal excretions? He definitely states that no conditions could well have been more surely devised for the cultivation of the bacillus of tubercle than those of a cow drained by the forced secretion of her milk, living in an atmosphere heated by her own body, and loaded with her own organic impurities. A free flow of milk from tuberculous cows is, in the first instance at least, profitable to the farmer; but, quite apart from the danger which it involves to our milk-fed children, it surely cannot, in the end, pay the farmer to produce tuberculous cows by such means as have hitherto been so common, and such as Dr. Russell so graphically describes. The cry of farmers is for compensation in the case of cows found to be tuberculous, and this cry has in the main led to the Royal Commission on Tuberculosis. But surely, so long as there is any chance of profit as the result of keeping cows under conditions which must certainly tend to tubercle, the case can hardly be one for compensation to the owners of these cows. Dr. Russell's memorandum, which is primarily addressed to his own authority, deserves the serious consideration of all sanitary authorities and dairy farmers; and so long as such conditions obtain as he describes, so long will it be important for parents and householders to boil or otherwise cook all milk used for the purposes of human consumption.

CHOLERA OCCURRENCES.

IN Syria the villayets of Aleppo and of Damascus have now remained free from cholera since early in January; and in Beyrouth the disease would seem to have almost disappeared, a few mild or suspicious attacks alone having occurred at Halessa and the immediate neighbourhood of that place. The Hedjaz is also free; Yemen district is, however, still looked upon as "suspect," although no definite occurrences of cholera would appear to have been reported thence. The cholera epidemic in Japan caused 4020 deaths in 1891. This is much less than in 1890, when 31,463 fatal cases were recorded. It is also to be hoped that the 1891 outbreak closed the epidemic period, for no fatalities were recorded during the month of December. From Teheran comes recent intelligence to the effect that cholera is widely prevalent amongst the inhabitants of Herat, and that the disease is extending. Within the last two years we have had repeated information as to cholera in Persia, but it was mainly towards the western portion of that empire, and in connexion with the epidemic in Mesopotamia; but this by no means implies that the disease at Herat has not been imported owing to unreported occurrences of cholera in Persia. Herat lies some fifty miles beyond the western boundary of Persia, and at the present moment the disease is stated to be spreading eastwards towards and across the Perso-Afghan frontier, along the main road from Herat to Meshed; Kuh-Sam, the last Afghan town in the direction of the frontier, is already attacked. Russia is taking special precautions against the spread of the disease from Afghanistan into Russian territory.

PARLIAMENTARY MATTERS.

MR PEASE has procured from Mr. Balfour the consent of the Government to a Select Committee on the registration of midwives. This is undoubtedly the way in which to settle this vexed question, and to give a fair hearing to all opinions. It may be questioned, however, whether Mr. Pease would not have shown more discretion in waiting for a new Parliament. Members are thinking now of little but their constituencies. Dr. Cameron hopes to induce the Government to order more perfect returns from the authorities of churchyards and cemeteries as to the number of burials of stillborn children. With regard to the present position and prospects of the Gresham University and the action of the Government in regard to it, we may refer our readers to a leading article in our present issue.

EFFECT OF DEEP INSPIRATION ON THE ASSIMILATION OF FAT.

ACTING on Professor Chudnovski's advice, Dr. A. Pavpertcff has made a series of observations on the effect of deep or forced inspiration and expiration on the assimilation of the fatty matters contained in food. The observations were made on nine healthy young persons, some of them being carried out in winter, others in summer. The sittings were held once a day in a large and well-ventilated room, each subject making from 120 to 200 forced inspirations and expirations. By analyses of the fæces during the three periods—before, during, and after the forced inspirations—it was found that the amount of fatty acids in the fæces in all cases diminished during the second period, the average diminution being 1·246 per cent. In the third period the quantity of fatty acids, as compared with that excreted in the first, diminished slightly in some cases and increased slightly in others. All that can be stated therefore as the result of the experiments is that a slight increase in the assimilation of fat takes place while forced or deep respiration is going on. The above research is published as a "preliminary note" in the *Vrach*, No. 6, 1892.

INTRA-CRANIAL SURGERY IN ITALY.

IT is cheering to witness the advance of surgery in Italy, which now bids fair to resuscitate the best traditions of Fallopio, Tagliacozzi, and Scarpa. Intra-thoracic and intra-abdominal surgery owe not a little to her recent operators, prominent among whom may be mentioned poor Count Loreta of Bologna, whose tragic end on July 23rd, 1889, as described in THE LANCET of Aug. 3rd following, is one of the saddest pages in the annals of the profession. His resection of the liver, and, still more, his digital divulsion of the œsophageal and pyloric orifices of the stomach, did not require the commemorative tablets in the Bologna Hospital and University to perpetuate their author's pre-eminence among his contemporaries. His influence and teaching are still active for good in the direction which would have pleased him most—that of intra-cranial surgery. In Florence, the week ending March 12th has been

signalised by a brilliantly successful operation in this department. Professor Baiardi, of the Spedale della Maternità there, had under his charge in the children's ward a little boy of four years and two months, suffering from "general cortical epilepsy," according to the official bulletin, "and idiocy." Having trepanned the cranium, Professor Baiardi (assisted by DRS. Mattucci and Giarré) removed two great tracts of bone in the parietal regions, "in correspondence with the *zona motrix* of the cerebellum." From the first day after the operation the little patient's eye, nearly always wandering, uncertain, and unconscious, "si mostrò sereno ed animato da un lampo di intelligenza" (showed itself serene and enlivened by a flash of intelligence), the "habitual restlessness was replaced by calm," and "sleep came to restore the feeble limbs of the child, which, a prey to sickness at the threshold of life, had neither consciousness nor instinct, could neither speak, nor walk, nor indicate its bodily requirements in any way; did not even know how to masticate." The recovery, vigilantly watched and assisted, is already so far satisfactory as to warrant every confidence in the lasting success of Professor Baiardi's operation.

THE ROYAL COMMISSION ON VACCINATION.

THE question which was recently addressed to the President of the Local Government Board as to the date when the Royal Commission might be expected to report affords an indication of an impatience which is not without justification. The Commission has already sat for nearly three years, and still sits weekly. The Commissioners began taking evidence under their third heading: "The case against vaccination, and especially against its continuing to be made compulsory," on Dec. 4th, 1889, and witnesses to the same effect have since then almost continuously occupied their time. We have no desire that any improper curtailment of evidence under this heading should be made; indeed, some of the most verbose witnesses whose evidence has as yet been published have rather helped than hindered the cause of vaccination. But we do hope that some limit will be put to mere verbiage, whether coming from one or the other side, and that the essential points on which the public desire authoritative guidance will not be lost amid a mass of unintelligible and irrelevant material, such as is regarded by some people as constituting "evidence."

REPORTED INFLUENZA AT NICE.

THE reports circulated in some portions of the daily press concerning the prevalence of influenza at Nice and in the Riviera generally, and the large exodus of visitors from that favoured resort, appear to be greatly exaggerated. A correspondent at Nice informs us by telegram that though influenza has been present there since November, the cases have at no time been numerous, and the mortality-rate has been small. The disease has now almost disappeared, and the health of the town is unusually good.

THE SLIPPERY STREETS.

THE unusual, and so far unseasonable, phenomenon of continued frost which has distinguished the present month has been comparatively free from some of its most familiar disadvantages. It has attained to no extreme severity, has not gravely affected public health, or occasioned a water drought with all its present and subsequent inconveniences. One inseparable drawback, the slippery street, is, however, of too near and pressing importance to be overlooked, and we are not, therefore, surprised that this has been duly marked for amendment in the daily press. Attention has been drawn to the perilous labour of overweighted horses as they struggle to make their uncertain way along our chief thoroughfares, guiltless as many of these are of any reliable attempt to provide a secure foothold. Ashes and sand may be had in abundance, and are even stored, evidently for use, at central points of traffic; yet there is lacking the intelligent energy required to utilise them. The matter clearly calls for inquiry on the part of civic authorities, and we trust that, should the present thaw prove to be of a transient character, the doorstep, the pavement, and the roadway, alike well dusted over, will bear witness to the prudent sense of those whose care they are. At least this much is due to the safety of man and beast.

DIPHTHERIA IN THE NEWBOTTLE DISTRICT.

DIPHTHERIA, evidently of a very infectious character, is prevailing around Newbottle and New Harrington in the Houghton-le-Spring rural district, and it is stated that in 20 per cent. of the cases the result has been fatal. The sanitary authority seem to recognise the special influence of the elementary schools in this diffusion, for they have not only closed them, but they have, in addition to processes of disinfection, ordered the destruction of books, maps, and other school property by which the infection may be retained.

THE PURITY OF CHLOROFORM.

IN a daily contemporary a curious mixture of "fact and fiction" recently appeared anent the dangers of impure chloroform. While we heartily concur in the general tenour of the writer's remarks, we feel bound to set him right in his facts. He refers to the researches of the younger Dr. Du Bois Reymond upon Pictet's chloroform, but omits to mention the eminent chemist's name or to credit him with his undoubtedly meritorious efforts to free chloroform from some of its dangers. The writer then quotes Dr. Du Bois Reymond, jun., and avers that "this high authority" says chloroform is often administered in a room "not designed for the purpose," and inferentially implies that thereby risk is run. This seems to us refining a little too far. If a room is large enough for a dwelling-place and is not lighted by illuminating gas, we fail to see why chloroform cannot reasonably be given in it, and no houses, save possibly those of the very poor, are without one such room; while in the case of the indigent, as a rule, the doctor sends the case to the hospital. Ventilation and absence of lighted gas are really the only desiderata. Again, exception is taken to the quality of the chloroform in general use, which is stated to be less pure than that described in the Pharmacopœia. Such a gratuitous statement cannot, of course, be answered, as no evidence one way or the other exists; but what the writer in question does not seem to be aware of is that the impurities upon which Dr. Du Bois Reymond lays such stress were those found even in the best samples of the drug, whether B.P. or not, but existing in so minute a quantity that a very large amount of the drug had to be crystallised before an appreciable amount of the refuse chloroform was obtainable. Nor could such impurities be discovered by ordinary tests. This being so, the statement—not strictly accurate, by the way, as the standard books give the rules for testing chloroform—that nowhere is "the physician" (*sic*) enjoined to test his chloroform before mixing it, is of less importance than at first seems apparent. As a rule, chloroform is not administered "pure," because, unless some spirit be added to it, it very rapidly undergoes decomposition, and is unfit for use; but the addition of alcohol obviates this, and if it be kept cool and out of contact with light it remains constant. Persons who undertake to give chloroform should of course respire the vapour themselves, test its reaction and smell, and this is always done; but to fractionate or freeze and distil the mother liquor is a task which, were the average medical

man required to undertake it, would severely test not only his chloroform, but his time and pocket, and would need the command of the special apparatus at present the sole property of M. Pictet. Referring to the inferiority of the chloroform commonly used when compared with that of the B.P., the writer makes the following remarkable statement:—"It is for similar reasons that ether, otherwise unduly extolled by English authorities, is considered entirely unfit for use in India." A more mixed statement could hardly be imagined. Of course, ether cannot be used in India, owing to the extreme difficulty of obtaining and keeping so highly volatile a body in any but a temperate clime. Nor, on the other hand, must the chloroform of India be regarded as being exceptionally pure, as the well-known firm which supplies both Scotland and India also very largely supplies England. Whether chemical purity be an absolute necessity for chloroform has yet to be decided, nor can it be said at present how far Dr. Du Bois Reymond's work upon the lower animals is to be taken as absolutely on all fours with the experience of surgeons with their human patients. The statement that in nine-tenths of the reports of cases no mention is made of the purity of the drug is an exaggeration. We shall very shortly show that a considerable amount of information under this head has been given in the reports.

THE ALKALOIDS OF ACONITUM NAPELLUS.

TWO papers of unusual interest were read at the last meeting of the Chemical Society on the 3rd inst. by Professor Dunstan. The first paper was a record of the research carried out jointly by Mr. Umney and Professor Dunstan on the properties of the roots of aconitum napellus. For the purpose of experiment they dried the fresh roots at a low heat, and then, after powdering, exhausted them with fusel oil. The alkaloids were dissolved out of the fusel oil with weak sulphuric acid, and the acid mixture was treated with chloroform to remove resin. The liquid was next made alkaline with ammonia and shaken with ether and then with chloroform. The ethereal solution yielded a gummy residue, from which they extracted aconitine as a crystalline hydrobromide, all attempts to crystallise the residue having failed. Crystalline aconitine was successfully prepared from the hydro-bromide, and it was found that the base dissolves only to the extent of 1 in 4431 of water. The base does not appear to exist naturally in a combined state, as the juice squeezed out of the fresh root contained very little aconitine. All attempts to crystallise another alkaloid found in the ethereal liquid failed. It possesses a bitter taste, does not produce numbness, and Mr. Umney and Professor Dunstan have given it the name "napellin." The chloroform solution contained aconine, $C_{26}H_{41}NO_{11}$, the properties of which and its relation to aconitine formed the subject of the second paper, contributed by Professor Dunstan and Dr. F. W. Passmore. The authors showed that by heating aconitine with water in a sealed tube at 150° C., aconine and benzoic acid are formed, as originally stated by Wright and Luff. The properties of aconine have been studied; it is dextro-rotatory, while its salts, like aconitine, are laevo-rotatory. The authors made attempts to synthesise aconitine by heating aconine with ethyl benzoate, and the successful results which followed the experiments are calculated to be of the utmost importance to pharmacy and medicine. The action which takes place may be represented as follows: $C_{26}H_{41}NO_{11}$ (aconine) + $C_6H_5CO.OC_2H_5$ (ethyl benzoate) = $C_{26}H_{40}(C_6H_5CO)NO_{11}$ (anhydro-aconitine) + C_2H_5OH (ethyl alcohol). Anhydro-aconitine so obtained forms aconitine with water. The experiment indicates that aconitine is mono-benzoyl aconine. $C_{26}H_{40}(C_6H_5CO)NO_{11}$. One or two derivatives were prepared—aconitine methyl iodide, for example—the physiological action of which, as well as the other new compounds, are being studied.

END OF THE STUDENTS' STRIKE IN ITALY.

THE academic cyclone on which we commented on the 27th ult. has "stormed itself out." At Rome on Saturday last, in the Giocchino Belli Theatre, a mass meeting of students was held, at which an order of the day was proposed to the following effect: that while the *cives* of the University resumed their studies they demanded a free pardon for the three of their number who were undergoing punishment at the hands of the Senatus. To this a counter-order of the day was moved: that "the students simply resumed their studies." At this the few ringleaders of the strike broke out in a storm of hisses and hootings. The mover of this order of the day being denied further hearing, his supporters left the hall *en masse* under protest. Those who remained ultimately approved the following: "The students of the University of Rome, yielding to violence, resolved to return to their classes." The "violence," be it noted, was the determination of the Senatus to maintain discipline in the case of the three offenders. So ends the great academic strike, for, after the Roman students have "climbed down," those of the provincial seats of learning will no longer defy their professors. A sharp lesson has thus been taught the academic youth of Italy, and we hope it will be a lasting one. Politics in the undergraduate stage were forced on the students of a past generation when their country's unity and independence were at stake. Now that that consummation has been effected, there is no excuse for political preoccupation—certainly none for a premature indulgence of the demagogic spirit—in the undergraduates of the present day. It rests with them to remove, or at least not to justify, the reproach fastened on Italy by one of her most patriotic sons—the reproach of being "a carnival nation," fonder of the cheap triumphs of the piazza than of steady, prosaic work.

THE DIAGNOSIS AND PROGNOSIS OF SYPHILITIC DISEASE OF THE BRAIN.

DR. OTTO HARMSEN has been induced by the scarcity of information relating to syphilitic disease of the brain to publish particulars of nine such cases, which had remained under observation for a year or more in the Berlin clinic for nervous diseases. The *Archiv f. Dermat. u. Syph.*, which publishes the account, points out that the meagre statistics of this affection have often been complained of, more especially by Naunyn. The chief symptoms in most instances were headache, vomiting, vertigo, facial paralysis, aphasia, and hemiplegia. In one case polydipsia and polyuria appeared some years after the primary infection, and serious cerebral symptoms quickly followed. In another case the nervous symptoms appeared as early as two years after the initial sore. Nearly all the cases were cured by energetic anti-syphilitic treatment, this being most marked in a patient never before treated with mercury. It should be mentioned that in many instances a temporary disturbance of the reaction of the pupil was the first and only indication of cerebral mischief, as has been pointed out by Oppenheim.

THE TREATMENT OF REDUCIBLE HERNIÆ BY THE INJECTION OF ALCOHOL.

EDWARD STEFFEN of Zurich, during the past three years, has treated 326 cases of reducible herniæ by Schwalbe's method, and has published the results in the *Correspondenzblatt für Schweizer Aerzte*. In most instances the patients were able to continue their work during treatment. After the injection the puncture was cleaned and covered with mercurial collodion. Notwithstanding, in a few cases,

sloughing took place; but this acted rather beneficially than otherwise. The number of injections in a single case varied from 6 to 168, the latter extending over a period of two years and a half. A medium-sized rupture in an adult required from 80 to 100 grammes of alcohol. The author used alcohol 70 per cent. in doses of one to four grammes, substituting in exceptional cases extract of oak bark. Latterly he found the addition of phosphoric acid, in the proportion of 1 to 200, advantageous. In thirteen cases the result of the treatment is not known, in twenty-nine a cure was not possible from various causes, such as obesity or size of the rupture; of the remainder, 245 cases are reported cured and 19 improved. The longest time taken to effect a cure was four years, the shortest one year. Of 257 inguinal herniæ, 216 cases were cured and 16 improved, with 23 relapses. Of 13 femoral herniæ, 9 were cured and 2 improved, with 1 relapse. Of 19 umbilical herniæ, 17 were cured, with no relapse. Of 4 herniæ in the linea alba, 3 were cured, the other improved. It appears that the more recent the hernia and the younger the patient the more favourable the prognosis, and the ambulant treatment, with intervals of three to seven days between the injections, gave better and more lasting results than the treatment in bed with daily injections.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda-Pesth.—Dr. J. Arkövy has been promoted to an Extraordinary Professorship of Odontology.

Prague (German University).—Dr. A. von Rosthorn of Vienna has been appointed to the chair of Gynæcology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. George Athanasovitch, a member of the first Bulgarian Ministry under Prince Alexander.—Professor Credé, the distinguished gynæcologist, of Leipsic.

THE annual dinner of the Medical Society of London was held in the Whitehall Rooms at the Hôtel Métropole on the evening of March 12th. Dr. Douglas Powell occupied the chair, and was supported by the President elect, Mr. Hutchinson, and the President of the Royal College of Surgeons. The list of speeches was short, but they did not lack in excellence. Among the speakers were the President, Mr. Hutchinson, Sir J. Crichton Browne, Mr. Brudenell Carter, and Dr. Allchin. A special and most pleasant feature of the evening was the excellent singing of Dr. Frederick Roberts and Mr. Anderson Critchett, which was very fully appreciated. Upwards of 160 Fellows and guests dined, the number being larger than on any previous occasion. A very enjoyable evening was spent, and the prosperous condition of this ancient Society was fully demonstrated.

Pharmacology and Therapeutics.

TELLURATE OF POTASSIUM IN NIGHT SWEATS.

THE effect of tellurate of potassium in arresting the night sweats of phthisis having been shown by some observations by Dr. Neusser, his results have recently been confirmed by a Polish physician, Dr. Pohorecky, who employed the remedy in fifty cases. It was prescribed in the form of pills, and was commenced in doses of one-seventh of a grain, gradually increasing to a grain. Usually less than half a grain in the evening was sufficient to prevent sweating during the night. It was found, however, that day sweats required rather larger doses than night sweats for their prevention. The action of the drug was generally manifested in about three-quarters of an hour, but in the more obstinate cases the effect passed off, and the sweating began again in from five to seven hours. In cases of less severity the effect was more lasting. No untoward action on the stomach was produced by a dose of two-thirds of a grain, and only by long-continued doses of a grain, and in exceptional cases, were eructations and loss of appetite produced. These symptoms, however, ceased on stopping the medicine. The only unpleasantness due to the tellurate was the garlic-like smell imparted to the breath, and this, though evident to other people, even for some time after the drug had been stopped, was not so perceptible to the patient. In order further to test the anti-sudorific qualities of tellurate of potassium, it was given to healthy persons in hot weather, and was found to be capable of entirely preventing perspiration in doses of a third or even of a sixth of a grain.

DIAPHORETIC PROPERTIES OF WILD ROSEMARY.

Dr. Schnabl, writing in a Polish medical journal, mentions as a valuable sudorific the wild rosemary, Ledum palustre, or Rosmarinum sylvestre, which is used in some parts of the country as a household remedy. The herb must be gathered when flowering. It is then dried and kept in sealed boxes. The leaves contain, according to Meissner, a volatile oil, from which, after long standing, a kind of camphor separates out; the other constituents found in the leaves are tannin, a gum resin, citric acid with traces of acetic, formic, and valerianic acids, a bitter extractive matter, and ericoline. An infusion of from a drachm and a half to three drachms is sufficient to produce perspiration. A century ago this drug was prescribed by physicians as an expectorant. It is also considered as an astringent by some, and has at various times enjoyed a reputation in many different maladies.

BINIODIDE OF THIOPHENE.

This drug, which is an analogue of iodol, contains 75·5 per cent. of iodine and 9·5 per cent. of soda. It is insoluble in water, but readily soluble in warm alcohol, ether, and chloroform. Dr. A. Hock of Vienna considers it a good substitute for iodoform in dressing wounds. It checks the formation of pus and prevents exuberant granulation. It can be used either as a powder or in the form of gauze, the latter of which is prepared by soaking the material in the following solution: Biniodide of thiophene, 5 parts; rectified spirit, 50 parts; sulphuric ether, 50 parts; glycerine, 1 part.

THE EMPLOYMENT OF DIURETIN IN CHILDREN.

According to Dr. R. Demme of Berne this drug can be given to children between two and five years of age in doses of 0·50 gramme daily, and in doses of 1·50 grammes to those between six and ten. In infants under one year it is liable to cause gastro-intestinal irritation. It appears to act upon the renal epithelium, and has proved of service in the dropsy of scarlatinal nephritis as well as in that due to mitral disease, after digitalis had proved ineffectual. Its action is not cumulative, but in one case of amyloid degeneration of the liver, kidneys, and spleen its use caused an erythematous rash, accompanied with profuse diarrhœa.

BROMAMIDE.

Dr. Augustus Caillé, in the *New York Medical Journal*, gives a preliminary report of an experimental research into the therapeutic value of bromamide, a new antipyretic and anti-neuralgic remedy. The drug, which was discovered by Messrs. Fischedick and Koechling of New York, is a new bromine compound of the anilide group containing 75 per cent. of bromine ($C_6H_2Br_3NHHBr$). Experiments as to the therapeutic properties of bromamide were conducted at the German Hospital for six months in various affections, including typhoid fever, acute rheumatism, chronic nephritis, various forms of neuralgia, &c. It appears that bromamide has the power of reducing the temperature in most cases of febrile disease from 1° to 2·5° F., without the excessive sweating produced by other antipyretic drugs. The dose is ten to fifteen grains as an antipyretic and antineuralgic, and may be administered in capsule, wafer, dry upon the tongue, or suspended in a fluid.

SOLVEOL AND SOLUTOL.

Solveol is a liquid prepared by dissolving cresylol in a solution of cresotate of soda. It is miscible with water in

all proportions, giving clear neutral solutions. It is an analogue of lysol, but it does not render the hands greasy like the latter and creoline. It is almost without smell, and possesses antiseptic properties superior to those of carbolic acid. In surgery a ½ per cent. solution is used. Solutol differs from the above in the fact that a solution of cresylate of soda is used to dissolve cresylol. This antiseptic cannot, however, be used in surgery on account of its caustic properties.

EFFECTS OF SALICYLATE OF SODA IN EXCESSIVE DOSES.

Dr. Frederick W. Mann, in a recent number of the *New York Medical Record*, records an instance of the serious and alarming effects produced by this drug in large quantity. He had prescribed for a patient suffering from acute rheumatism salicylate of soda in four-grain doses every two hours. The patient, however, finished the contents of his bottle—amounting, in all, to two drachms of the drug—within the space of four hours. He soon began to suffer from hallucinations, and finally became quite maniacal. After spending a night in a police cell he was removed to a hospital, and during the next few days he suffered from a condition closely resembling delirium tremens. When spoken to he responded pleasantly, and showed no coarseness of speech or action; his violence arose simply from his attempts to elude his imaginary pursuers. At the end of five days the hallucinations disappeared, and recovery was complete.

TREATMENT OF DYSENTERY.

Drs. Lardier and Pernet strongly recommend the use of salol and iodoform in the treatment of dysentery. Salol, in four-grain doses suspended in mucilage, acted in a most salutary manner; but iodoform—from four to six grains daily, combined with opium—gave the most beneficial results. The iodoform was given in capsules, each containing three-quarters of a grain of iodoform and a quarter of a grain of opium, to be taken five or six times during the day. The pain and tenesmus were relieved by warm boracic acid enemata, and in obstinate cases by a suppository containing hydrochlorate of cocaine and opium. In addition to this treatment great cleanliness was observed, the patient being washed daily with a saturated solution of boracic acid or with a solution of corrosive sublimate of the strength of 1 in 500.

REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

THE Medical Officer's report for 1890 appears as the supplement to the twentieth Annual Report of the Local Government Board, and it deals exclusively with the work carried out in the medical department. The vaccination returns form a forecast of an increasing laxity in the administration of the Vaccination Acts, which we fear is largely due to the determination of a number of authorities to discontinue the performance of their statutory duty during the sittings of the Royal Vaccination Commission, and which may at any moment bring about serious results. In 1881 the births unaccounted for as regards vaccination were 5·7 per cent. of the births in the metropolis and 4·3 in England; whereas the figures stood 10·3 and 8·2 respectively in 1888; and the increase of default will doubtless be found to be still greater since then. A considerable number of medical reports are reprinted in the volume, together with introductory comments by Dr. Buchanan. Some of these reports we reviewed at the time of their issue, notably that by Dr. Barry, on the Tees epidemic; that by Dr. Blaxall, on Staines rural district in relation to the state of the Thames above the intakes of the London water companies; that by Dr. Parsons, on epidemic pneumonia at Scotter; that by Dr. Low, on suspected cerebro-spinal meningitis in Lincolnshire and adjacent counties; and also that by Dr. Parsons, on the epidemic of influenza. All but the latter, which has been published as a separate volume, are reproduced *in extenso*, and they thus form part in the permanent record of the work of the department.

Then comes a lengthened report on an inquiry into certain systems which have been adopted in northern and midland districts, with a view of utilising slop-water for the purposes of water-closets, or of providing trough-closets, the desire on the part of certain authorities being to secure the water-carriage of excreta without the complication and expense of water-closets as commonly constructed. Both forms of closet reported on appear to answer certain limited purposes, provided they are of proper construction, and Dr. Parsons gives a lengthy description of their cost, adaptability to certain localities and classes, and of the conditions which are essential to their success, his report being freely illustrated by diagrams. All such closets must be out of doors; and as regards the slop-water closets, it is clear, as we have more than once pointed out, that success can only be obtained where the slop-water, after being allowed to accumulate, is then automatically discharged in bulk along the drain, so as to clear out the pipe or other receptacle into which the excreta are first received. If this and certain other conditions are not complied with, it seems pretty clear that greater nuisance will arise from slop-closets than is associated with several improved forms of ash-closet and other so-called dry-closets.

One very interesting chapter in the volume is that in which Dr. Ballard, who has recently retired from official life, gives a summary of his own labours and those of others in tracing out the causes of occurrences of disease of a specific character which have resulted from the use of infected articles of flesh food. These diseases have come to be styled cases of food-poisoning, and Dr. Ballard's name has been very closely identified with their study, both clinically and etiologically. He speaks, therefore, with authority when he gives his view as to the circumstances under which they are brought about. Discussing this view, Dr. Buchanan says:—"Dr. Ballard is disposed to infer that, in this class of cases, the morbific quality has commonly not been inherent in the animal furnishing the food, but has been obtained by the food *from its surroundings* during the time that the food-material was being kept"; and he adds a warning as to the bearing of this view on maintaining wholesomeness in all larders, pantries, and other places where human food is kept for sale or otherwise stored. Some account is also given of the preliminary work which has been done by Mr. Power, Dr. Barry, and Mr. Thompson in relation to the serious prevalence of lead-poisoning which has followed, at curiously irregular intervals, on the use of certain moorland waters for drinking purposes. Information on the subject has already been obtained from several hundred medical officers of health; and the extent of the mischief may be judged of when it is explained that even a preliminary record goes to show that the health of no less than 600,000 persons is involved in the subject. Hitherto efforts seem mainly to have been directed to methods of remedying the mischief after it has been allowed to take place; the present investigation has, however, been undertaken with a view of getting at the root of the mischief, for it is announced that its prime object is to learn how the waters in question come to acquire a power of dissolving lead. This is obviously the proper function of a health department, prevention, rather than cure, claiming its first attention.

Turning next to Dr. Buchanan's record of the auxiliary scientific investigations, we find that the study of the pathology of diphtheria has been continued by Dr. Klein, who reports additional instances in which inoculation of milch cows with cultures of the bacillus diphtheriæ have given rise to disease having the same pathological characters as those previously witnessed. In one such case the milk itself contained the characteristic bacillus at one stage, but not at another stage. Further work has been done by way of studying the influence of concurrent infections in the same animal; and in one instance, where the chemical products obtained by the growth of bacillus pyocyaneus were used to see whether they exerted any antagonism on the subsequent inoculation of the bacillus of diphtheria, it was found that, instead of any antagonistic action, the chemical products in question served rather to enhance the activity of the resulting disease. But as regards experiments bearing upon tuberculosis now in progress, Dr. Klein reports that "evidence has already been attained to justify

an expectation that the chemical products of bacillus pyocyaneus will be found to have distinct inhibitory action on the tuberculous process."

Dr. Sydney Martin's investigations, following on his former ones in 1889, into the chemistry of anthrax go to show that whereas the anthrax albumoses, and not the alkaloid, give rise to the fever of anthrax, it is to the anthrax alkaloid that the local œdema and coma of anthrax are due. "The albumoses," writes Dr. Buchanan, "as such, have indeed seemed to possess but little specific quality, the fever produced by them being much the same as that producible by the familiar albumoses of peptic digestion. It is essentially, it would appear, the alkaloid (resulting from further change of the albumoses) which is the cause of the specific phenomena and of death in anthrax." The bearing of this on other specific infections is obvious, and Dr. Martin's other investigations as to the meaning of bacilli having on the one hand virulent, and on the other attenuated, characteristics are equally interesting. Amongst other contributions is one by Dr. Hamer, who, in studying the question of susceptibility and insusceptibility, has investigated the doctrine of phagocytosis, a doctrine which, it is admitted, cannot at once solve the difficulty with which the investigator finds he has to deal. Dr. Andrewes has also made examination of the micro-organisms associated with suppuration and with phlegmonous and other inflammation in man. Dr. Buchanan reports that in this work Dr. Andrewes has, amongst other things, made study of the life history of staphylococcus pyogenes within the bodies of the experimental animals, but that some of his ends were frustrated by his inability to obtain the erysipelas organism in an active state, facilitating comparison between the streptococcus of that disease and the streptococcus pyogenes. Whether the more exclusively scientific or the public health aspects of the volume be considered, it will be found one well worthy of study.

THE REPORT OF LORD WANTAGE'S COMMITTEE.

No. II.

WE concluded our previous article by saying that the present Government, with a general election in front of it, was not at all likely to grapple with a big and expensive military question. Still, it is certain that it must be undertaken sooner or later; and we shall be surprised if some more radical changes are not then proposed than any which have as yet been suggested. Meanwhile the divergence of opinion between Sir A. Haliburton and his colleagues is too wide, and some of the more prominent features in the report of Lord Wantage's Committee have been too seriously damaged by his vigorous criticism, for any War Minister to adopt the Committee's recommendations as part of a Ministerial policy. Nevertheless, as we have said, the report of the majority of the members is in many respects an able and interesting document, and, constrained as they were to run on existing lines, some of their proposals seem both pertinent and practical. As the Committee point out, the regulation prohibiting all recruiting beyond the army establishment annually voted by Parliament prevents advantage being taken of a favourable state of the labour market to provide for clearly foreseen needs. Checks are placed on recruiting when recruits can be had. The Committee suggest that, at any rate, it should be permissible to recruit above the establishment, so long as the average numbers maintained during the financial year do not exceed the numbers voted by Parliament. This seems a sensible suggestion. The Committee proposed modifications in the term of service, so as to make it as easy and elastic for the private soldier as possible. An army that depends upon voluntary enlistment must move with the times and adjust itself to popular requirements. As far as practicable, and without risk of grave prospective injury to the maintenance of an adequate reserve, the man who desires to continue with the colours and make the army his profession should be allowed to do so; and, on the other hand, if a man has strong reasons for leaving the colours and going into the reserve, he should not be prohibited from doing so. The function of a reserve is to complete the battalions for war service, and not to be a substitute for them, as would practically be the case now.

Foreign service, and especially service in India, is a great drain on the youth and manhood of the army, and the provision of drafts of a certain age and service for India depletes the home battalions, and is a recurring source of difficulty. As Lord Wolmer pointed out, battalions of very young and immature soldiers have a very high hospital admission-rate. In the case of the 2nd Battalion of the Suffolk Regiment, for example, which went to Egypt, it was 1406 per 1000. As the reserve, according to Mr. Stanhope, will soon amount to a strength of 80,000, it does not seem to us impracticable to introduce more elasticity into our system in the directions indicated. As regards such corps as the Royal Artillery, and the garrison artillery especially, every inducement should be held out to retain the services of technically trained men.

According to the present system, the militia is supposed to act as a nursery for the regular army. Might it not be preferable to reverse the position and make the latter feed the militia as part and parcel of the reserve, by which the military training of the men would be maintained to some extent, whereas the reserves at present get no training. The increase of pay recommended by Lord Wantage's Committee practically amounts to a proposal to offer the soldier seven shillings a week clear, with good board, lodging, and clothes. It cannot be said, as a matter of common sense and fairness, that these are extravagant terms to offer in exchange for efficient labour of the kind which soldiers are called upon to perform. But it is urged that this would in the aggregate amount to a large sum, and would not, after all, have the desired effect of inducing a proportionately larger number of men of nineteen and twenty years of age to enlist. We are inclined to think there is much force in this objection. But it would, we believe, attract a larger number of more desirable young men than the present terms, and there would, in any case, be a proportionately greater choice, the stronger and older lads could be selected, and the physical standard would consequently be raised. As regards deferred pay, the committee would abolish the present system in favour of one of gratuities of smaller amount, and the sum saved in this direction would go towards lessening the expense of their proposals for the soldier's benefit in another. A large majority of the men—and it is a soldier's question—are in favour, however, of maintaining the present system, which has not yet been in operation long enough to warrant a final decision as to its working.

Sir A. Haliburton's report, with its tables, figures, financial estimates, and bases of comparison with continental armies, has a kind of precision and method which give him a firmer foothold than his colleagues. Sir A. Haliburton estimates the cost of the Committee's proposals at a million and a half. Assuming this to be the case, the question at once arises whether this new expenditure could not be met by economies effected in other directions.

Adverting to narrow-minded prejudices against the army exhibited by the refusal to admit soldiers in uniform to places of entertainment and the like, the Committee suggest that the War Office, as the guardian of the rights and position of soldiers of the British army, should take steps to test the legality of such refusals. This kind of prejudice is keenly felt by soldiers, and is said to exercise an adverse influence on recruiting. This gives us an opportunity of inquiring, *en passant*, whether the class of accommodation provided in London, for example, for the examination of recruits, does not also exercise a prejudicial influence. Instead of having good, airy, and attractive quarters in a good position, the recruiting establishment at St. George's barracks is approached through a dirty back street, and is a very uninviting sort of place, but little calculated to make a favourable impression on a respectable recruit. It is open to question whether the authorities go the best way to work in this respect, and in advertising for recruits. The recommendation that the soldier should have two kinds of uniform — one for work, the other for show—is a sensible one. And, from a hygienic point of view, we consider that the number of sentries should be diminished. There is probably nothing that tells more on the health of young men, or is more unpopular, than the large and apparently unnecessary amount of night work in the army. A certain amount there must be of course, even as a matter of military training, but, to take the case of the Guards for example, the night duties are an important factor in causing inefficiency and waste

from sickness and invaliding. It is very important, too, to avoid over-pressure in trying to form raw recruits into complete soldiers in the shortest possible time. Their habits of life are suddenly changed, they have often been underfed before enlistment, and are easily fatigued, and with one thing and another they find they have no time to themselves. It is not surprising that, under such circumstances, the recruit acquires a distaste for the service. We feel bound to say, however, that much more care is exercised nowadays in this respect. We think the Committee is right in urging the claims which our discharged soldiers and sailors have upon the State for employment in any posts for which they are qualified, as recommended in the report of Mr. Childers' Committee, and believe that it would give an impetus to recruiting. The day has gone by for exclusive privileges, and the Guards, as we have said already, should take their turn of foreign service, as far as the Mediterranean stations are concerned at any rate; and if there were a battalion of Footguards composed of soldiers selected from our infantry for physique and war service it would be a popular measure. Moreover, the stimulus of reward of some kind is necessary for soldiers as for other people. If it cannot be given in the way of increased pay it might be in another direction—viz., a greater number of commissions might be open to the rank and file than at present.

To conclude, it seems to be generally agreed that there must be as many battalions at home as there are abroad if the existing system is to work properly at the present time. And as regards the near future, the soldier's pay and advantages will have to be increased if a voluntary army of adequate strength has to be maintained. The appointment of committees and the adoption of different expedients will only postpone a decision of this question for a season.

ROYAL MEDICAL BENEVOLENT COLLEGE.

DR. C. HOLMAN, treasurer of the College, asks us to publish the following appeal:—

The Council are of opinion that on no previous occasion since the establishment of the College has so important a proposition been brought before their subscribers and before the profession at large. They earnestly hope that many medical men will exert themselves amongst their friends and patients, and make the ensuing festival a successful beginning of an alteration the benefits of which, to both pensioners and scholars, are simply at present not to be calculated.

Dear Sir,—On Tuesday, April 5th, the Right Hon. the Lord Mayor of London has consented to take the chair at the biennial festival of the College.

At this dinner the Council desire to raise funds: 1. To assist in meeting the annual outlay for the support of the fifty pensioners and fifty foundation scholars, an outlay amounting to between £5000 and £6000. 2. To aid in raising a sum of about £26,000, so that the Council may give the pensioners augmented incomes, and thus dispense with their compulsory residence at Epsom College, and enable them to spend their declining years amongst their relatives and friends.

That this is a truer form of charity has been of late years fully recognised; the system of pensions as opposed to compulsory residence in almshouses has been adopted by H.M.'s Government in the case of the Greenwich Hospital, and by many of the best known charities in England.

The suggestion, however, has in addition to its charitable side one which the Council submit is of almost as great importance.

It has been forced on the Council that the school cannot be carried on as it should be unless its accommodation is in all ways increased. Thanks to the unremitting and successful efforts of the head master and his staff, the school is full, and from the inquiries made respecting it, and from the number of names down on the list waiting for admission, there appears no reason to doubt that this satisfactory state of things will continue.

Even, however, with the present numbers more room is wanted for convenience, and therefore efficiency, in teaching and for general school purposes, so that if the numbers are to be *increased* an immediate and large *extension* of accommodation must be provided. This weighs very heavily on the Council who have the management of the school, and hence their urgent appeal to the public.

Any enlargement of the existing school buildings must, even when carried to its utmost limit, be a mere palliative, so that new buildings are essential; and if the pensioners could be provided for elsewhere the buildings they now occupy could be at once utilised, and so provide for an important part of the necessary extension. Thus a double benefit to the pensioners and to the school would accrue, and in this benefit the boys on the foundation, who are an integral part of the school, and who differ from the rest only in that they are educated and maintained free of cost to their relatives, take their full share.

The Editors of THE LANCET, impressed with the value of this scheme, have most liberally offered £1000 if the full amount be collected.

Some of the public recognise the very important services which the medical profession render to the community, and to them it is hardly necessary to appeal, or to do more than to state that money is wanted urgently for the objects set out above, to secure their coöperation.

Many, however, do not recognise the peculiar position in which a medical man stands. He is bound (if he does his duty, and there are few who do not) to hold himself at all times and in all weathers at the disposal of those who may want his help. He attends the poor as well as the rich, he goes to places and houses insanitary as well as sanitary, he exposes his life in all climates and at all seasons, with the result that the lives of medical men are shorter than those of men following other professions, and the time within which they can provide for their families is proportionately shorter. "The medical death-rate is far in excess of the rates in the other learned professions, and also of the rates in most trades and industries. .... The general result of the comparison is to show that, with very few exceptions, the mortality of medical men is higher under every heading than the mortality of males generally, and that under some of the headings the medical mortality is twice or thrice, or even more times, greater than the average."[1]

All these facts show how difficult it must be for medical practitioners to make adequate provision for their families, and accounts in some measure for the very large amount of distress which necessarily exists amongst the widows and orphans of medical men.

The Council earnestly hope that you will aid them in the great work they have in hand: firstly, in meeting the necessary annual outlay to fulfil the trust bequeathed to them by the founder; secondly, to secure at as early a date as possible an improved position for the pensioners; and, thirdly, to assist them in maintaining the school in its present state of efficiency, and in raising it to the level of the first schools of the country, a position to which it is fast attaining.

We shall gladly take charge of any donation or subscription you will kindly entrust to us. Ten guineas, or one guinea annually, constitute a governor.—We are yours very faithfully,

J. FAYRER, M.D., F.R.S., K.C.S.I., Chairman of Council.
C. HOLMAN, M.D., Treasurer.
J. L. PROPERT, M.B., Chairman of Festival Committee.
J. B. LAMB, Secretary.

37, Soho-square, W.

THE ROYAL BRITISH NURSES' ASSOCIATION.

THE Draft Charter submitted by this Association, with its petition for incorporation, to the Privy Council recites in the name of Her Majesty—

"That it has been represented to us by our most dearly beloved daughter Helena, Princess Christian of Schleswig-Holstein, Princess of Great Britain and Ireland, that in 1887 a Society was established in London called the 'British Nurses' Association,' which has since its establishment been joined by more than 3000 nurses, each one of whom has been engaged for three years or more in attendance upon the sick; that the said Association was not established for the purpose of gain, but for the purposes of the improvement of the profession of nurses and of the promotion of their efficiency and usefulness and of assisting them by various benevolent schemes; that in furtherance of the said objects a list of nurses has been compiled and published setting forth the names and addresses of nurses, with the names of the hospitals or institutions at which they have been trained and the length of training which each has received, thus enabling the public to form a more accurate judgment of the professional education and experience of the nurses so registered; that a benevolent fund has been established for the purpose of giving aid to nurses, and that the management of the said Association is vested in certain eminent members of the medical profession, matrons of hospitals, and other persons interested in nursing; and that in 1891 we were graciously pleased to confer on the said Association the prefix and title of 'Royal' and to command that the said Association should be styled the 'Royal British Nurses' Association.'"

It then proceeds, after some additional and merely formal recitals, to declare—"That our said most dearly beloved daughter Helena, Princess Christian of Schleswig-Holstein, Princess of Great Britain and Ireland, our trusty and well-beloved Sir James Paget, Baronet; Sir Spencer Wells, Baronet; Sir William Savory, Baronet; Sir Richard Quain, Baronet; Sir Joseph Fayrer, Knight Commander of the Most Exalted Order of the Star of India; Sir Henry Thompson, Knight Bachelor; Sir James Crichton Browne, Knight Bachelor; Sir Dyce Duckworth, Knight Bachelor; Sir Edward Sieveking, Knight Bachelor; Sir Alfred Garrod, Knight Bachelor; Sir George Humphry, Knight Bachelor; Robert Brudenell Carter, Fellow of the Royal College of Surgeons of England; John Williams, Doctor of Medicine; William Bezly Thorne, Doctor of Medicine; Bedford

[1] William Ogle, M.D.Oxon., F.R.C.P., Registrar-General.

Fenwick, Doctor of Medicine; Isla Stewart (Matron and Superintendent of Nursing of St. Bartholomew's Hospital); G. M. Thorold (Lady Superintendent of the Middlesex Hospital); Ethel Gordon Fenwick (Lady Matron and Superintendent of Nursing of St. Bartholomew's Hospital); Cassandra Beachcroft (Lady Superintendent of the Lincoln County Hospital); Margaret Breay (Acting Matron of the Metropolitan Hospital); Mary N. Cureton (Lady Superintendent of Addenbrooke's Hospital, Cambridge); Christina Forrest (Lady Superintendent of the York County Hospital); Louisa Hogg (Head Sister, Royal Naval Hospital, Haslar); R. F. Lumsden (Hon. Lady Superintendent of the Royal Infirmary, Aberdeen); Henrietta C. Poole (Nursing Superintendent, Adelaide Hospital, Dublin); Gertrude A. Rogers (Lady Superintendent of the Leicester Infirmary); Georgina Scott (Lady Superintendent of the Sussex County Hospital); Maud G. Smith (Lady Superintendent of the Royal Infirmary, Bristol); Catherine J. Wood (late Lady Superintendent of the Children's Hospital, Great Ormond-street); and all other persons who, pursuant to this our Charter, become members of the Corporation established by this our Charter, shall be a body corporate by the name of the Royal British Nurses' Association, having a perpetual succession and a Common Seal," together with the usual incidents of incorporation which are duly set out.

It next proceeds to set out the purposes and powers of the Corporation as follows: "1. The maintenance of a list or register of nurses, showing as to each nurse registered her name and address, and the name of the hospitals or other places at which she has been trained and the length of training which she has received. 2. The founding and maintenance of schemes for the benefit of nurses in the practice of their profession and in times of adversity, sickness, and old age. 3. The promotion of conferences, public meetings, and lectures in connexion with the general work of the Corporation. 4. The doing anything incidental or conducive to carrying into effect the foregoing purposes."

Then follow certain ancillary clauses in common form, and a staff of officers is provided, to the following effect: "There shall be a President of the Association, and such number of honorary officers as the Association may from time to time think fit to appoint. The first President shall be Her Royal Highness Princess Christian of Schleswig-Holstein. The first honorary officers shall be those persons who at the date of this our Charter are honorary officers of the Royal British Nurses' Association in the recitals of this our Charter specified. On the resignation or death of the President or of any honorary officer, and as occasion may arise, the vacancies shall be filled up by the General Council hereinafter mentioned upon the nomination of the Executive Committee hereinafter mentioned. The President shall preside at all meetings of the Corporation and at all meetings of the General Council and Executive Committee, or of any subcommittees thereof at which she may be present. The President shall have power to summon meetings of the Corporation at any time she may think fit so to do, in order to submit to the members thereof such matters of importance relating to the affairs of the Corporation as she may deem requisite."

The members of the Corporation are defined to be—"1. The President. 2. All persons who at the date of this our Charter are members of the Royal British Nurses' Association in the recitals of this our Charter specified. 3. Persons from time to time elected as hereinafter mentioned, and being either (*a*) medical practitioners duly qualified to practise as such in any part of the British Empire according to the laws for the time being in force; (*b*) nurses (subject to such conditions as may be prescribed by the by-laws for the time being in force). 4. The Corporation may provide by by-laws for the admission of other persons to honorary membership."

In view of recent discussion as to the by-laws of the College of Surgeons, some special interest will naturally be felt in the provisions concerning general meetings. "There shall be a general meeting of the members of the Corporation within the space of six calendar months after the date of these presents. An annual general meeting of the members of the Corporation shall thereafter be held once in every year at such time as may be prescribed by the by-laws for the time being in force, for the election of members of a General Council of members of the Corporation, and to receive annual financial and other reports for the past year and for other purposes of the Corporation, and other general meetings may be held from time to time as occasion shall require and as the by-laws shall direct." Also in the power to make by-laws, which is conferred by the following clause: "At any general meeting it shall be lawful for the members of the Corporation, or such of them as shall be then present, to ordain and make such by-laws as to them or the major part of them shall seem proper for the regulation and good government of the Corporation and of the members and affairs thereof, and generally for carrying the objects for which the Corporation is founded into full and complete effect, with reasonable penalties and fines to be contained in such by-laws on the offenders for non-performance of or disobedience to the same, and the said by-laws, penalties, and fines, or any of them from time to time, to alter, change, or annul as the said members in general meeting shall think requisite, and to mitigate the same as they shall find cause, so as all and singular such by-laws, penalties, and fines be reasonable and not repugnant or contrary to the provisions of these presents or to the laws and statutes of this our realm."

The formation and powers of the General Council and of the Executive Committee, together with details as to voting and the like, complete the draft.

THE SCOTTISH UNIVERSITIES COMMISSION.

ORDINANCE No. 18 has just been issued by this Commission, and embodies regulations for the graduation and instruction of women in the Universities. It applies to the Faculties of Arts, Science, and Medicine, but only the provisions applicable to the last shall be referred to here. Power is given to the University Court to admit women to graduation in such faculty or faculties as the Court may see fit. Power is also given to the Court, after consultation with the Senatus, to make provision within the University for their instruction, either by admitting them to the ordinary classes, or by instituting separate classes for them; and such classes shall be conducted by the professors or lecturers in the several subjects, or by lecturers specially appointed for the purpose by the University Court. It is provided that the Court shall not institute classes where men and women shall be taught together except after consultation with the Senatus, and no professor whose commission is dated before the approval of the Ordinance by Her Majesty shall be required, without his consent, to conduct classes to which women are admitted. The conditions of graduation are to be the same for both sexes, with the following exception, namely, that so long as within the Faculty of Medicine in any University provision is not made for the instruction of women, it shall be in the power of the University Court to admit to graduation women who have received the requisite instruction in any University of the United Kingdom, or in any Indian, colonial, or foreign University recognised for the purpose by the University Court, provided that every candidate for graduation shall produce evidence of having satisfied the conditions with respect to the preliminary examination, and shall be examined in all the subjects necessary for graduation by the examiners of the University in which she takes her degree. As soon, however, as provision is made within the University for the instruction of women in all subjects required for graduation, the conditions of their graduation shall then, even in this respect, be similar to those for men. With reference to women who have begun their studies before this ordinance comes into operation, it shall be competent for the University Court to admit them to graduation in medicine if they complete their medical studies in accordance either with the regulations for graduation hitherto in force, or with the regulations prescribed by this ordinance; while, as regards their studies prior to the date at which this ordinance comes into operation, such women may have obtained their instruction in any classes which the Court may accept for the purpose. Provision is further made that women proposing to graduate must pay the matriculation fee of the University, and power is given to the Court to make arrangements for the use by them of the libraries and museums open to matriculated students of the University

ARMY AND NAVY ESTIMATES.

UNDER Vote A for the establishment of the Regular Army, exclusive of India, we find, grouped under the head of General and Departmental Staff, that the Medical Department (including the Head Quarters Staff) numbers altogether 624. The total of the Medical Staff Corps of all ranks is 2410. The amount of Vote 2, for medical establishment, pay, &c., is £290,100, showing a net decrease of £2700 for the coming financial year. Under Vote 11, for establishments for military education, with an estimated total of £113,500, the cost of the Army Medical School stands at £7084, a small amount compared with that of the Royal Military College and Academy respectively; the estimated expense of the former being £43 635, that of the Royal Military Academy £34,421. From the detailed statement of medical staff it seems that the total numbers, including both British and Indian establishments, amount to 954. In the prefatory explanations of the differences between the amounts proposed in the Army Estimates for 1892-3, and the amounts voted for 1891-2, it is stated that the pay of the medical staff has been over-estimated in past years, insufficient allowance having been made for casualties. The cost of medicines and instruments is expected to decrease in the ensuing year. These estimates are a mine of well-arranged and clearly expressed information on a variety of subjects connected with the public services.

Vote 3 gives the gross estimate for the medical establishments and services for the Navy as £150,530, from which appropriations in aid (£25,530) have to be deducted, leaving £125,000 as the net estimate for 1892-3. There is a net increase of £2300 over last year. The numbers in the medical establishments at home and abroad amount to 111, which include two inspectors-general of hospitals, eight deputy inspectors-general, ten fleet surgeons, six staff surgeons and twenty-seven surgeons, three head sisters and twenty-one sisters, and fourteen dispensers, in addition to chaplains, storekeepers, &c. The total salaries and allowances amount to £35,286, being nearly the same as last year. Among the expenses of the Admiralty Office, salaries, and allowances, £7453 is the estimate for the Medical Department. This sum covers the pay and allowances of a total of seventeen, composed of the Director-General of the Naval Medical Service, a deputy inspector-general of hospitals and staff surgeon, with a clerical establishment.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5866 births and 4469 deaths were registered during the week ending March 12th. The annual rate of mortality in these towns, which had been 23·4 and 20·5 per 1000 in the preceding two weeks, rose again last week to 22·9. In London the rate was 22·1 per 1000, while it averaged 23·4 in the thirty-two provincial towns. The lowest rates in these towns last week were 16·5 in Newcastle-upon-Tyne, 16·8 in Cardiff, 17·8 in West Ham, and 17·9 in Brighton; the highest rates were 28·2 in Blackburn, 30·0 in Liverpool, 31·0 in Halifax, and 32·8 in Swansea. The 4469 deaths included 406 which were referred to the principal zymotic diseases, against 426 and 390 in the preceding two weeks; of these, 170 resulted from whooping-cough, 113 from measles, 48 from diphtheria, 42 from diarrhœa, 15 from "fever" (principally enteric), 13 from scarlet fever, and 5 from small-pox. No deaths from any of these zymotic diseases were recorded in Plymouth, Preston, or Halifax, while they caused the highest death-rates in Birkenhead, Bolton, Liverpool, and Wolverhampton. The greatest mortality from measles occurred in Portsmouth, Swansea, Norwich, Birkenhead, and Liverpool; from whooping-cough in Burnley, Birkenhead, Derby, Bolton, and Wolverhampton, and from diarrhœa in Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the thirty-three large towns. The 48 deaths from diphtheria included 34 in London, 2 in West Ham, and 3 in Manchester. Two fatal cases of small-pox were recorded in London, 2 in Liverpool, and 1 in Oldham; 13 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 1 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1202, against 1198 and 1190 on the preceding two Saturdays; 117 new cases were admitted during the week, against 86 and 96 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 461 and 379 in the preceeding two weeks, rose again last week to 454, but were 71 below the average. The causes of 88, or 2·0 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Leicester, Leeds, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Halifax, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·8 and 22·5 per 1000 in the preceding two weeks, rose again to 22·6 during the week ending March 12th, but was 0·3 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·0 in Paisley and 17·1 in Dundee to 27·5 in Perth and 28·1 in Aberdeen. The 629 deaths in these towns included 29 which were referred to whooping-cough, 16 to measles, 9 to diarrhœa, 7 to diphtheria, 6 to "fever," 3 to scarlet fever, and not one to small-pox. In all, 70 deaths resulted from these principal zymotic diseases, against 62 and 68 in the preceding two weeks. These 70 deaths were equal to an annual rate of 2·5 per 1000, which was 0·4 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 24 and 19 in the preceding two weeks, rose again last week to 29, of which 19 occurred in Glasgow, 4 in Edinburgh, and 4 in Aberdeen. The 16 deaths referred to measles exceeded by 5 the number in the previous week, and included 15 in Glasgow. The fatal cases of diphtheria, which had increased in the preceding four weeks from 1 to 12, declined again last week to 7, of which 6 occurred in Glasgow and 1 in Aberdeen. The 6 deaths from "fever" were within 2 of the number in the previous week, and included 3 in Glasgow and 3 in Aberdeen. Two of the 3 fatal cases of scarlet fever were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had increased in the preceding three weeks from 146 to 165, declined again last week to 154, and were 47 below the number in the corresponding week of last year. The causes of 53, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 39·5 and 32·7 per 1000 in the preceding two weeks, rose again to 35·5 during the week ending March 12th. During the first ten weeks of the current quarter the death-rate in the city averaged 38·5 per 1000, against 29·9 in London and 19·6 in Edinburgh. The 238 deaths in Dublin during the week under notice showed an increase of 19 upon the number in the preceding week, and included 12 which were referred to measles, 6 to whooping-cough, 2 to diarrhœa, and not one either to small-pox, scarlet fever, diphtheria, or "fever." In all, 20 deaths resulted from these principal zymotic diseases, equal to an annual rate of 3·0 per 1000, the zymotic rate for the same period being 2·6 in London and 1·2 in Edinburgh. The fatal cases of measles, which had been 3 and 7 in the preceding two weeks, further rose to 12 last week, and exceeded the number recorded in any week since September, 1887. The deaths referred to whooping-cough, which had been 8 in each of the preceding two weeks, declined to 6 last week. No fatal case of "fever" was recorded in Dublin last week, the numbers in the previous two weeks having been 7 and 4 respectively. The 238 deaths in Dublin last week included 34 of infants under one year of age, and 71 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded those recorded in the preceding week. Two inquest cases and 3 deaths from violence were registered

and 90, or more than a third, of the deaths occurred in public institutions. The causes of 20, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

Inspector-General of Hospitals Doyle M. Shaw, C.B., completes his period of service in charge of the Naval Hospital at Haslar on the 25th inst., and, as already stated, will be succeeded by Inspector-General Mortimer, from the Plymouth Hospital. The vacancy at Plymouth will, it is understood, be filled by Inspector-General W. H. Lloyd.

Surgeon-Captain Hugh Rayner (Grenadier Guards) will accompany, as Medical Officer, the party under the charge of Major Julian J. Leverson, R.E., Her Majesty's Commissioner for the delimitation of British and Portuguese spheres of influence in East Africa. The party leaves Southampton on the 19th inst. by the Royal Mail steamer *Moor*.

Surgeon-Major T. J. Gallwey, M.D., has been appointed Principal Medical Officer of the Egyptian Army.

Deputy Inspector-General G. J. Shaw, M.D., late Bombay Army, and late assay master, Madras Mint, died on the 3rd inst. at Aberlow, Ventnor, aged 73.

We learn from the Navy Estimates that the vote for medical establishments amounts to £125,000, showing an increase of £2300.

ARMY MEDICAL STAFF.—Surgeon-Lieutenant-Colonel Henry Joseph O'Brien, M.B., to be Brigade-Surgeon-Lieutenant-Colonel, vice R. Collins, M.B., retired (dated Feb. 14th, 1892).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff-Surgeon William Tait, M.B. to the *Nelson*, for temporary service (dated March 8th, 1892). Surgeons: Alfred Cropley and Edward A. Spiller, M.D., to Jamaica Hospital, and Ernest C. Lomas to the *Excellent*, additional (all dated March 15th, 1892).

MADRAS SUBORDINATE MEDICAL ESTABLISHMENT.

A Commission is conferred on the undermentioned Senior Apothecary under the terms of the Royal Warrant of July 19th, 1890:—Senior Apothecary, Second Grade, Chas. Thipthorp (dated July 19th, 1890, but to rank as Honorary Lieutenant from March 21st, 1889).—The undermentioned Senior Apothecaries, Second Grade, will rank as Honorary Lieutenants from the following, dates instead of those given in the *London Gazette* of Nov. 28th, 1890:—Christian Michael Antonio (since deceased), Dec. 22nd, 1889; Jonas Isaac Laffrey, Jan. 11th, 1890; Geo. Edwin King, Feb. 8th, 1890; Jonathan Chadwick, Aug. 28th, 1890.—The promotion of Apothecary, First Grade, Edmund Trutwein, to be Senior Apothecary, Second Grade, ranking as Honorary Lieutenant, notified in the *London Gazette* of Dec. 12th, 1890, is post-dated to Oct. 14th, 1890.—The promotion of Apothecary, First Grade, Chas. Trutwein (since deceased), to be Senior Apothecary, Second Grade, ranking as Honorary Lieutenant, notified in the *London Gazette* of Dec. 12th, 1890, is cancelled.

VOLUNTEER CORPS.—*Rifle:* 1st Nottinghamshire (Robin Hood): Herbert George Ashwell, Gent., to be Surgeon-Lieutenant (dated March 12th, 1892).

THE DRAINAGE OF CAIRO.—The Cairo correspondent of the *Daily News* states that a commission of engineers has sent in a report to Sir Colin Moncrieff on the drainage of Cairo. Sir C. Moncrieff will submit the scheme to the Ministers. The original outlay will amount to half a million sterling. It is proposed to construct huge sewers which will deposit their contents into a reservoir, whence the sewage will be pumped out on to a tract of land.

NATIONAL LEPROSY FUND.—A meeting of the Special Committee of the Fund was held in one of the Conference Rooms of the House of Commons, on the 11th inst., for the purpose of further considering the report of the Commissioners on the results of their investigations in India. There were present the Hon. G. Curzon, M.P., in the chair, Mr. Hutchinson, Dr. George Heron, Mr. C. Macnamara, Mr. E. Clifford, and, in attendance, Sir Somers Vine, honorary secretary of the Fund, and Dr. P. Abraham, honorary secretary of the special committee.

Correspondence.

"Audi alteram partem."

BLOOD CHANGES AND URIC ACID.

To the Editors of THE LANCET.

SIRS,—I should be very glad if you would allow me space for a few remarks on one point in the very admirable lecture of Dr. A. E. Wright in your issue of March 5th, as it has an important bearing on a research in which I have long been engaged. I refer to his remarks on the increased excretion of uric acid, on p. 517, where it appears that he attributes the *plus* uric acid to the nuclein constituent of the tissue-fibrinogen injected; that is, he believes it is due to a *plus* formation of uric acid. Another observer, Dr. Hunter, in his remarks on a paper which I read before the Medical Society in December, on a Case of Raynaud's Disease with Paroxysmal Hæmoglobinuria,[1] urges that the excess of uric acid is the result of the destruction of blood elements, and not, as I in the above paper and in my book[2] have contended, the cause of this destruction. In the case which formed the subject of my paper at the Medical Society I am reminded by my colleague, Dr. Wheaton, that in the blood which he kindly examined after one of the attacks of hæmoglobinuria he found not only great diminution of red cells, but an excess of white cells, and an increase in coagulability. I gave my reasons for believing that an excess of uric acid in the blood preceded and was the cause of these blood changes, the very ones about which Dr. Wright is speaking. I also pointed out that treatment of the uric acid factor produced a remarkable improvement in the case. I am not only prepared to assert that the uric acid is the cause of these blood changes, but I can go further, and show how there came to be an excess of uric acid in the blood.

In my paper on the excretion of uric acid in epilepsy[3] I pointed out that for some hours before the onset of the fits there was a *minus* excretion or retention of uric acid, and I inferred that the *plus* excretion and excess of urate in the blood which came later and produced the fits was the natural and ordinary result of the previous *minus* excretion. It is a very simple matter to alter from hour to hour or from day to day the excretion of uric acid; but whenever there is produced by drugs or diet a retention of, say, five grains of uric acid, there is certain to be at some future time, when the conditions become favourable to its solution in the blood, a *plus* excretion of a corresponding amount. I have pointed out that in epilepsy and in headache the *minus* excretion of urate that precedes the attack is accompanied by mental conditions of happiness and well being, the results of the blood being free from urate, so that if anyone was to argue that the *plus* excretion of urate is the result of the headache or of the fit, I should ask whether the headache or fit began a week ago, because the fluctuation in urate excretion began then. In my experience of epilepsy it is a very common thing to be told that he or she was very bright and well on Thursday, Friday, and Saturday, but on Sunday had six or eight fits; the whole thing is a fluctuation in urate excretion, which produced the fits, but was not produced by them. A similar fluctuation in urate excretion accounts for the periodicity of the uric acid headache, and in the case of headache I have shown (and I believe the same will yet be found to hold in cases of epilepsy) that if the blood is kept clear of uric acid the disturbance of the nervous system does not occur. Now precisely the same thing is seen in paroxysmal hæmoglobinuria—that is, the attack is preceded for days or hours (as the case may be) by feelings of happiness and well-being, and a *minus* excretion of uric acid. In the first case of this disease recorded in my book (p. 212) the symptoms of well-being preceding the attack were specially mentioned by the relatives, and I there give the excretion of urates in other cases during and between the attacks. If the *plus* excretion of the attack is due to a fresh formation of uric acid, why is it preceded by days or hours of *minus* excretion, why does the *plus* excretion of the attack correspond in amount to

[1] THE LANCET, vol. ii. 1891, p. 1339.

[2] Uric Acid as a Factor in the Causation of Disease. J. & A. Churchill. 1892.

[3] Neurologisches Centralblatt, Mai, 1888.

the *minus* excretion which preceded it? I have been led to argue from these and other facts too numerous to mention here that in paroxysmal hæmoglobinuria the excess of urate in the blood is the cause of the changes that take place in it; but it can, I believe, be proved to demonstration that the *plus* excretion of urate which accompanies these attacks is not their result. Into the observations of Horbaczewski quoted by Dr. Wright I do not here attempt to enter in detail; but I will say that the *plus* excretion noticed by this observer does not seem to me to prove that there was in any of the conditions mentioned a *plus* formation of urates.

I am, Sirs, yours faithfully,

Brook-street, W., March 14th, 1892. ALEXANDER HAIG.

"THE BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA."

To the Editors of THE LANCET.

SIRS,—In one of your leading articles in the current number of THE LANCET you comment upon the importance of the recent discussion at the Berlin Medical Society on the pathology of diphtheria, more especially with regard to the part played by Löffler's diphtheria bacillus in its causation. It must have been the experience of all of us that there are cases in which we have suspected the existence of diphtheria, and yet from the clinical characters alone we have been unable to arrive at a diagnosis; for all membranous exudations are not diphtheritic, and, moreover, diphtheria is not always accompanied by membranous exudation. All of us who see much of diphtheria in public institutions or in private are ready to welcome any bacteriological method by means of which, as in the case of the tubercle bacilli, we may make a certain diagnosis.

During a recent visit to Berlin I was enabled, through the kindness of Dr. A. Baginsky and his assistants, to watch the cases in the diphtheria pavilion of the Kaiser und Kaiserin Friedrich Kinderkrankenhaus, and to see the methods in use in the laboratories attached to that institution. The children admitted to the diphtheria pavilion were in the first place received into a special ward for twenty-four hours, during which time cultivations were made from the membrane or exudations taken from their fauces, and they were then either admitted to the general ward if the diphtheria bacillus was found, or to special wards if only streptococci or non-pathogenic micro-organisms were detected. I came away impressed with the value of the bacteriological diagnosis of diphtheria when the investigations were conducted by trained hands, and where it was possible not only to cultivate the bacilli, but in doubtful cases to test the correctness of the histological diagnosis by injecting a portion of the culture medium into guinea-pigs. Dr. Baginsky himself was sanguine enough to believe that before long this method will be practised by every general practitioner in Germany. You have pointed out the difficulties in the way of this as regards the time and skill required, and these difficulties must always be especially felt where it is impossible to resort to the inoculation of animals to confirm results. Nevertheless, I am inclined to think that much valuable aid may be rendered in the way of diagnosis by the microscopical examination of the exudations in suspected cases of diphtheria, and still more by cultivation if time and opportunity are afforded. In most cases cover-slip preparations of the exudations from diphtheria will, if properly stained, show the bacilli readily enough, and they can be recognised without difficulty. In this way I have been able to diagnose diphtheria from an examination of the nasal secretion and the sputa coughed up in patients where no membrane was found till some time later. The chief difficulty which meets us here is the different size and shape which the diphtheria bacillus presents according to its age and the circumstances of its growth. It stains well with carbol-fuchsine or Löffler's pot. methylene blue, but so do all sorts and conditions of micro-organisms, and we are dependent entirely for its recognition upon its morphological characters. The typical bacillus of diphtheria is thick and short, often slightly curved, found singly, but more often joined together in twos or more. In the older forms it is thicker and darker at the ends than in the centre. But even in pure cultivations forms may be seen which do not present typical characters, varying in size, and in some instances being shorter, so as to be almost indistinguishable from diplococci. It is certain we cannot depend on the morphological characters alone for their diagnosis in all cases. The difficulty does not always end when cultivations are made on blood serum; the colonies are not always characteristic, and a microscopical examination may still leave us in doubt, unless typical forms are present. These difficulties no doubt are lessened as experience increases, but that they are real difficulties I know by experience. It is certain that through the researches of Löffler, Escherich, Heubner, Baginsky, and others in Germany, and Roux and Yersin in France, an important addition has been made to our knowledge of the pathology of diphtheria and our methods of diagnosis, and if there are still difficulties in the way, we are not without hope that they may be overcome.

I am, Sirs, yours truly,

Manchester, March 18th, 1892. HENRY ASHBY.

THE ASSOCIATION OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—The several admirable and exhaustive leading articles which have appeared in the columns of THE LANCET on the recent action of "Steele *v.* Savory" seem to me to leave little room for further argument. The committee of the Association of Members fully deserve, as you have so well said, to be credited with the courageous effort made to serve the general body of the Members of the College; and it is scarcely possible to believe that anyone who has looked into the facts will deny this, much as he may disapprove of the legal proceedings. But this difference of opinion cannot be assigned as a reason why the expenses incurred should be defrayed by the few who have stood in the breach and thereby happen to appear the more immediately responsible. A considerable amount of difficulty, however, presents itself in any attempt to bring home this truism to the minds of the 10,000 or 12,000 Members of the College, most of whom must have felt more or less interest in the work in which the Association of Members have been engaged. I therefore venture to ask permission to occupy a small space in your columns to make it perfectly clear that the committee have invariably acted under the advice of counsel, and to the best of their ability in the interests of Members, and feel that they may confidently appeal to the 4000 Members who appended their signatures to the petition presented to the Privy Council some three or four years ago. A small contribution from each one of them will be sufficient to meet the legal expenses incurred on their behalf. The large body who supported the Association of Members at this period showed at least that they had the courage of their opinions; and it is impossible to believe that a profession proverbial for its generosity and open-heartedness will withhold its sympathy from those of their brethren "who have fought the battle and find themselves burdened with costs amounting to £2000." In your words, Sirs, I hope and trust "the Members for whom the struggle was commenced will respond to the appeal of Dr. Danford Thomas, the treasurer, and by their prompt and generous assistance testify to the courage and self-abnegation displayed in the important contest in which the plaintiffs were engaged on behalf of the members generally."

I remain, Sirs, your most obedient servant.

Bedford-square, March 15th, 1892. JABEZ HOGG.

POST-MORTEM APPEARANCES OF THE BRAIN OF INFLUENZA PATIENTS.

To the Editors of THE LANCET.

SIRS,—I have read with much pleasure and satisfaction the important statement which appeared in THE LANCET of March 12th, from Dr. Macdonald, who has, as far as I am aware, been the first to discover and to demonstrate the special lesion which I have been led to consider as productive of the feverish attack of grip. It was in the hope of eliciting such information as Dr. Macdonald has given us that I started, with your permission, the discussion on this subject which has been going on in THE LANCET. There can be no doubt that what Dr. Macdonald has found in one case must have been present in a great many others, but was overlooked because no special attention was given to it. I confess that I do not quite understand why Dr.

Goodall should show himself so anxious to repudiate the existence of characteristic lesions in the brain of gripped patients. If he has read my paper on the neurotic aspects of influenza, which appeared in THE LANCET of Nov. 14th and 21st, he surely must concede that I have made out at least a *primâ-facie* case for the existence of a bulbar lesion as the material base of the phenomena witnessed in the feverish attack. Let me remind him that Adams of Cambridge deduced the existence of Neptune from symptoms of disturbance seen in the movements of neighbouring celestial bodies, and that, after this idea had been duly ridiculed by the authorities at Greenwich, the planet was discovered by the French astronomer, Leverrier, in the exact position which the English *savant* had predicted. An analogous case in medicine is that of labio-glosso-laryngeal paralysis, the focal lesion of which was predicted by Wachsmuth in 1864, and shown to exist by Charcot in 1870. I can therefore claim good precedents for the course I have taken in this matter.

Dr. Goodall is dissatisfied with the meagre account of post-mortem appearances extracted by me from Maillard's work. I feel inclined to reply that half a loaf is better than no bread, and that I am not responsible for Maillard not having been more explicit, but as Dr. Goodall has indulged in an apparently destructive criticism of the cases brought forward, I will, with your permission, follow in his track, and endeavour to "pulverise" him in turn. Due regard for your space, however, must limit my remarks to the first two cases in question. Commenting on the first case, Dr. Goodall seems to be very much annoyed that the lesions should have been limited to the cerebellum, and states that "we might at least have suspected hyperæmia elsewhere." He also insinuates that the appearances noted—viz., hyperæmia, hæmorrhage, and softening—might be rather due "to a fit of sneezing or coughing than to any such theoretical cause as that suggested." In reply to this, I may mention that the subject of the case was a domestic servant, aged twenty-five, who was in perfect health ("en parfaite santé") at the time she was seized by influenza. Unfortunately for Dr. Goodall's startling suggestion that hyperæmia, hæmorrhage, and softening of the cerebellum in a young woman who was in perfect health might be owing to sneezing or coughing, she never sneezed or coughed at all during her short illness (three days). It happened to be a case of the so-called "gastric form" of influenza, beginning with most distressing vomiting, which was shortly followed by grinding of teeth, violent headache, incessant agitation, and later on by coma. The "sneezing and coughing" theory, therefore, falls absolutely to the ground in the present instance. In the second case Dr. Goodall can see "no bearing of the bursting of an aneurysm of the basilar artery upon the pathology of influenza." May I therefore be allowed to remind him that the bulb receives a vascular supply from the basilar artery, and that intense congestion of that vessel during the attack of grip may have led, first, to the giving way of the internal and middle coat of the artery, and, finally, to rupture of its external coat? The history of the case renders such an explanation highly probable. The patient was a man aged forty-seven, having no neurotic, alcoholic, or syphilitic antecedents, and who had been in good health, with the exception of having had typhoid fever and bronchitis some time previously to becoming gripped. He had two attacks of influenza, the principal symptoms of the first being severe pain at the back of the head, vertigo, and tinnitus, from which he had never suffered before. Now Dr. Goodall knows as well as myself that the basilar artery gives branches, not only to the bulb, but also to the membranous labyrinth, and that the vertigo and tinnitus are therefore most significant symptoms in connexion with the formation of the aneurysm of that artery, which, I take it, occurred during the first attack of grip. The patient, although he recovered from the first feverish attack, never felt well afterwards, and had a second attack three months later. The first symptom was, once more, vertigo; he fell down, and remained unconscious for half an hour. After coming to he complained of severe pain in the head and all over, of tinnitus, vertigo, impaired sight, and had a pulse of 50 beats in the minute—all signs of irritation in the sphere of the basilar artery. Two days afterwards he suddenly fell out of bed, and died—of course, from the rupture of the aneurysm. Surely there never was a clearer or more logical sequence of events. I now take leave of Dr. Goodall, in the hope that he may yet come round to my view of the subject, and that he may give us at some future time, not barren criticism, but positive contributions to our knowledge in the way Dr. Macdonald has done.

I am, Sirs, yours faithfully,

Harley-street, March, 1892. JULIUS ALTHAUS, M.D.

ETHER AS A STIMULANT AT THE TEMPERANCE HOSPITAL.

To the Editors of THE LANCET.

SIRS,—With regard to your homily to the staff of the Temperance Hospital, it would be well if you had made sure of your facts first. The anonymous correspondent has misled you. Nearly all the ether used therein has been used for anæsthetic purposes; a small quantity has been used externally, and a very little has been administered subcutaneously in rare emergencies. I am not aware that any has been used internally, and for the very good reason that ether is only soluble in alcohol, and there is not a drop of spiritus etheris on the premises. So much for the mare's nest. But your article shows a complete misapprehension of the object of the Temperance Hospital. It is admitted that some people (probably many) have acquired a craving for drink through having been ordered to take some common form of alcoholic beverage; it is also a fact that some reformed drunkards have had their desire for alcohol reawakened through being ordered beer, wine, or spirits during illness; and it is notorious that a large number of people think that some form of alcoholic liquor is absolutely necessary for the cure of most diseases, exceedingly useful in nearly all the rest, and especially valuable during convalescence as a tonic and "strengthening" agent. It is also thought that a remedy which is so valuable to cure disease must be equally useful to ward it off. Alcoholic liquors are still largely recommended and relied on by a great many medical men, and were still more when the Temperance Hospital was first established. Its object, then, is to show that the ordinary use of alcohol is totally unnecessary, and thus to check the spread of the alcohol habit. But we can avoid, and have avoided, that. It would be equally absurd to reject ether because some have taken excess in the north of Ireland as to abandon the medicinal use of opium because opium is a common curse in China. If I were practising among ether or opium drunkards I should avoid the use of these medicines as much as possible. If alcohol had never been taken save in medicine, and had only been dispensed as a drug, there would have been no great drink question urgently demanding solution. Such a use of alcohol would be harmless, but at the Temperance Hospital we have shown that even when alcohol might be useful it is possible to employ something else. Our experience proves that its value is grossly exaggerated, and that its total disuse would not render the cure of disease more difficult. You are also probably aware that the special legislation which has put an end to ether drinking in Ireland is an order scheduling ether as a poison, only to be procured as other poisons are. We shall be quite content when alcohol, which has done infinitely more harm than ether, is treated in the same way.

I am, Sirs, yours truly,

J. J. RIDGE, M.D. Lond.,

March 12th, 1892. Physician to the London Temperance Hospital.

THE EFFECTS OF INFLUENZA UPON THE MIDDLE EAR.

To the Editors of THE LANCET.

SIRS,—My limited experience as a country practitioner has been so strangely opposed to that of Sir W. Dalby regarding the effects of influenza upon the middle ear that I venture to ask your permission to draw attention to a case in which a very serious ear complication supervened upon an attack of influenza in a patient who had previously no ear troubles of any kind. This man came under my care in the spring of 1890. He was apparently in a fair way to recovery from this disease when he was suddenly seized with acute pain in the left ear. The influenza attack had run quite a usual course and was not of a very severe type. The temperature had been normal for a few days before the ear trouble began. With the view of relieving the pain I ordered hot applications in the way of fomentations and

poultices, with the result that shortly a free discharge of pus escaped from the meatus. Relief followed, and the patient appeared better. The discharge continued to be free and abundant for a few days, when it became much scantier, and then disappeared almost completely. The result of this was that the patient began to complain of intense pain in some of the joints, more especially the knees. The temperature went up to 104° F., and the case had now all the appearances of rheumatic fever, but in view of the previous history one could not help associating the condition of the joints as well as the pyrexia with the stoppage of the discharge from the ear. With the renewed application of moist heat to the ear and the internal administration of salicylate of soda the discharge became more abundant, the pyrexia became less, and things looked generally more favourable, until a few days subsequently it was noted that there was considerable swelling, and some slight redness over the mastoid. The general condition of the patient was now not at all satisfactory. There were great anorexia, extreme debility, great pallor, and the discharge from the ear was not as abundant as one would have liked under the circumstances. In view of this state of matters, I became anxious to have a further opinion upon the case, and I determined to take the patient at once to see Mr. Richard Williams of Liverpool. Mr. Williams was impressed with the gravity of the case, and advised that the mastoid should be thoroughly dealt with. He proposed to cut down freely upon it, and if necessary to gouge the bone, and then to pass a drainage-tube into the opening thus made and bring it out through the external meatus. On the following morning the patient was put under chloroform, and Mr. Williams dealt with the case precisely as stated above, with the exception that the drainage-tube was not passed through into the external meatus. A considerable amount of pus escaped when the incision was made, the mastoid was gouged, and the diseased portion thus removed. A drainage-tube was inserted and the wound stuffed with antiseptic dressing. The improvement in the condition of the patient after this radical form of treatment was most marked in two or three days. The appetite returned, the pallor diminished, and the wound steadily healed up with healthy granulations from the bottom, and the discharge became gradually less, until in a very short time it disappeared completely. Within a few weeks the wound was completely closed, the hearing power was returning and slowly improving, and in the course of a few months the patient was as strong as ever and the hearing excellent on the affected side. This is the only case in my experience during the epidemic in which the mastoid became so seriously affected, and the general condition so grave in consequence; but I met with a considerable number of cases of influenza in which there supervened during convalescence great pain in the ear, followed by a purulent discharge therefrom, in persons who stated that they had previously no ear troubles of any kind, and who thus corroborated the experience recorded in THE LANCET of March 5th by my old teacher, Dr. Walker Downie of Glasgow.

I am, Sirs, yours faithfully,

HUGH JONES, M.B.,
Late Resident Physician, Glasgow Western Infirmary.

Dolgelly, North Wales, March 14th, 1892.

"THE FUTURE OF THE HUMAN FOOT."

To the Editors of THE LANCET.

SIRS,—This, as Mr. Clement Lucas tells us,[1] "would appear to be a gradual suppression from without inwards of the toes, and a further strengthening of the great toe line on the inner side. That this is all that is required is abundantly proved by observing the thousands who, even at the present time, use only the great toe as a means of progression." Kindly permit me to point out how remarkable it is, if this be true, that we do not find proof of it in hypertrophy of the muscles acting on the great toe, and in atrophy of those acting on the smaller ones. These latter move together each of them in the same vertical plane, and, even when closely packed against each other, may be firmly pressed downwards in every step. That such is commonly the case it would be easy to prove. The great toe, on the other hand, having as its position of rest an inclination upwards and outwards over the second toe, moves downwards and inwards away from the others. It is clear that when fixed in the median-pointed boot the great toe cannot so move, and that the joint surfaces, which are prevented from following the course for which they are adapted, either do not move at all or do so only with irritation to the structure. And I venture to assert that if anyone will examine a large number of feet, as I have for many years been doing, he will find evidence of defect of function in the great toe more often than in the smaller ones. I except the little one, but cannot admit that even it, poor thing though it seems, is "useless." The metatarso-phalangeal joint of and the muscles acting on this toe are generally found to be in working order, and even when it consists of a continuous bone only, I maintain that it still coöperates with its fellows in relieving the pressure which falls on the heads of the metatarsal bones as the heel is uplifted and the body propelled onwards from the front part of the foot. Nor do I believe that it is "fast disappearing," hardly used though it be. A stunted form of it, I may remark, was an ideal, if not a reality, when the Venus di Medici was chiselled. I do not disparage the great toe. Seventeen years ago I wrote of it that "there is no more marked distinction between man and the lower animals." Then and ever since I have persistently enforced in THE LANCET (Feb. 9th and June 30th, 1884, and Sept. 25th, 1886) and elsewhere the importance of its functions. I plead only now that the smaller toes are also important and not likely to be effaced.

What "the future of the human foot" is to be will depend, to some extent, on how those who, in the present, have to advise with respect to its use and to the prevention of troubles arising from misuse. For myself, I regard it as an organ of the body having its own proper physiology, as definite as that of the eyeball, so that to speak of the joint at the base of the great toe as not equal to the strain upon it, while its functions are almost always exercised under conditions involving irritation, seems to me to be unfair. Moreover, I cannot without regret observe that Mr. Lucas continues to associate a common deformity (flat-foot) with "immoral practices"—he has spoken more plainly elsewhere.[2] It is really due, as I contend, to defect of function, and, as I know, it can, by renewal of function, be repaired. Anyway, the wide prevalence of it, in varying degree, among all classes, in both sexes, and at nearly all ages, appears to me to forbid, for the present, the prediction of "a further strengthening of the great toe line" as a prospective development.—I am, Sirs, yours faithfully,

Gloucester, March 4th, 1892. T. S. ELLIS.

HEREDITARY SUPPRESSION OF FINGERS.

To the Editors of THE LANCET.

SIRS,—Mr. Clement Lucas, in his interesting paper on Suppression of Digits in THE LANCET of the 27th ult., refers to the frequent occurrence of contracted little finger, accompanied by contraction or malformation of the toes. This subject has received some attention of late from Mr. Adams[3] and Mr. Anderson,[4] but I believe that the occasional association of contracted little finger with hammer-toe was first pointed out by my friend and colleague, Mr. Fisher, in his article on the treatment of deformities in the "International Encyclopædia of Surgery." Mr. Lucas attributes this not very common deformity of the little finger and the commonly ill-grown little toe to the same cause—the fact that they are not wanted. Now, Sirs, I venture to think that, however well we may get on without a little toe, thanks to the highly artificial circumstances of the foot in most civilised countries, those of us who use our hands would miss the little finger very much indeed were it to be removed, and so far from expecting this digit to disappear I should expect, if usefulness and evolution are related, that it would become more developed rather than less, for the civilised man (such, for instance, as the musician) uses his fingers independently of each other more than does the savage. I am inclined to the belief that the little toe is well formed in most new-born children, but that the early and continuous use of boots prevents its growth and development. If, however, it be in course of elimination as a useless appendage, I

[1] THE LANCET, Feb. 27th.

[2] Brit. Med. Jour., May 3rd, 1884.

[3] Transactions of the Medical Society of London, vol. xiv., p. 119.

[4] THE LANCET, July and August, 1891.

should like to ask Mr. Lucas whether he would explain this as the effect of design, or on the Darwinian hypothesis that the individual with an ill-formed little toe has the best chance in the struggle for life; or would he, following Lamarck, attribute its suppression to the hereditary transmission of an acquired peculiarity.

I am, Sirs, yours truly,

Park street, W., March 2nd, 1892. E. MUIRHEAD LITTLE.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

THE annual meeting of the governors of this hospital was held on the 16th inst., the mayor, Mr. Lawley Parker, being in the chair. The 112th report was read, in which it was shown that the total number of patients was: In-patients, by ticket, 548; without ticket—i.e., accidents and urgent cases—3529; out-patients, by ticket, 14,153; without tickets—i.e., accidents and urgent cases—34,105; total number, 52 335. The total income from all sources has been £18,181 19*s.* 3*d.*; the deficiency in the funds, which at the beginning of the year amounted to £6073 1*s.* 8*d.*, has, thanks mainly to the receipt of £5000 from the musical festival, been reduced to the amount of £2458 6*s.* 8*d.*—a fact which the committee regard as a matter for sincere congratulation. The Earl of Dartmouth was elected president for the ensuing year. A meeting of the general committee was held on the 8th inst. to receive the report of the building committee upon the competitive plans, and to select the architect for the new building. There were twelve competitors. The committee, with Mr. Waterhouse, R.A., as consultant, recommended three plans for the prizes of £150, £100, and £50 which had been offered. The first prize was unanimously awarded to Mr. William Henman, who has already done good work in various parts of the country.

The Jaffray Suburban Hospital.

The committee have just issued their sixth annual report. During the year 208 patients had been treated. The average stay of the patients in the hospital was fourteen weeks. The epidemic of influenza interfered with the working of the hospital, the matron and several of the nurses having been affected. Twenty-four patients had been treated according to Koch's method for tuberculosis, and generally the utility of the hospital according to its objects had been fully maintained.

The Athletic Institute.

This new institution is vigorously pursuing its work, and already doing much good. "Purity of life in relation to athletic vigour" was the subject of a lecture given on the 10th inst. by Mr. C. G. Wheelhouse. A large and attentive audience listened to this discourse, and frequently showed their appreciation of the lecturer's remarks by the applause given. The next of the series is to be given by Sir Dyce Duckworth, on the "Value of Athletic Exercises as Counter-agents to Sedentary Pursuits." The series embrace a number of free lectures which the Council has been able to arrange by the kindness of the President, Mr. H. Mitchell. The institute will doubtless become popular and useful in promoting exercises and amusements conducive to health and interest.

The Water Scheme.

The attention of our rulers still continues to be given to the solving of this great problem. The expenditure involved in the proposed new supply involves some six millions of money. No wonder that some economists and captious critics view with alarm this enormous outlay. Alternative schemes have been mooted and some opposition raised to the original plans. The need of providing for the future supply of the city is the paramount necessity which governs the action of those who know most about it, and it is more than probable that Parliament will sanction the undertaking as at present propounded. The suffering ratepayer will have to sacrifice his sentiments and his pockets to the general good of the community, and continue his grumblings as heretofore.

March 16th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Convalescent Society.

THE annual meeting of the Convalescent Society for Newcastle and for the counties of Northumberland and Durham has been held. Dr. Philipson submitted the report for the thirty-second year of the association, which showed that the admissions to the Prudhoe Memorial Convalescent Home at Whitley would bear favourable comparison with those of previous years. The number admitted in 1891 was 1495. The total number of patients admitted since the institution was opened in 1869 was 23,217, of whom over 95 per cent. received benefit.

Diphtheria in Durham County.

Owing to the late epidemic of diphtheria in the Aycliffe district of the Darlington sanitary authority the Local Government Board have requested the authority to instruct the medical officer for the district (Dr. Hardy) to prepare a report on the outbreak, in which he says that there were fifteen cases up to Jan. 15th, of which six proved fatal. Several scholars had suffered from sore-throat, and when seen were affected with paralysis. After the school was closed there were no more cases, but on its reopening fresh cases occurred, which he thought pointed to the school as an infected centre. On inspection of the school nothing amiss was found. I mentioned in a previous note the outbreak in the Houghton-le-Spring sanitary authority, which has now in most part subsided. In order, as far as possible, to prevent a fresh outbreak or a continuance of the disease, all the school books, maps, &c., to the value of about £120, have been burnt.

Newcastle Health Society.

The lectures under the auspices of this Society have been continued, Dr. J. W. Smith's subject being "The Nature of Disease and the Purpose of Medicine." Mr. Frederick Page, I believe, finished the course for the session last Saturday, his subject being "Human Parasites in relation to Food and Disease." The lectures have been very well attended.

Middlesbrough.

Middlesbrough has again made a feature of its Hospital Sunday, the processions to the various places of worship being headed by the mayor, members, and officials of the corporation. The Durham Rifles and other volunteers attended, also the Tees Submarine Miners. The collections were for the North Riding Infirmary and the North Ormesby Cottage Hospital.

Important Accident Assurance Case.

At the Carlisle Assizes last week an action was brought by a widow, and was decided in her favour, involving some very fine medico-legal points. Her late husband had taken out a policy, one of the conditions being that the deceased was suffering from no physical infirmity which rendered him peculiarly liable to accident. Now the deceased had lost an eye twenty years previously from an explosion, and the Lord Chief Justice held that the company could not repudiate their liability, as the loss of the eye must have been obvious to the agent of the company. The deceased met with another accident by which he lost the other eye, and from the effects of which he ultimately died. The widow stated that no conditions were read over to him when he made the assurance proposal, and that if they were he could not understand them, or do more than sign his own name. The jury returned a verdict for £500, and his lordship refused to grant the stay which was applied for.

Interesting Hospital Cases.

I have seen a case in the Royal Infirmary in which Mr. Frederick Page performed Mikulicz's operation (in a patient suffering from chronic dilatation of the stomach) on the 2nd inst. So far the case is doing well. I believe there is no record of this pyloro-plastic operation having been done in this country before. Mr. S. Macaulay has a curious case of objective tinnitus at the Newcastle Throat and Ear Hospital, which I have also seen. The patient is a little girl aged nine, who has not suffered from any other affection of the ear. On listening with the unaided ear a cracking sound is heard, such as would be produced by cracking the

finger nails. The affection has lasted three months, and has not been mitigated even by treatment, including persistent Politzerisation &c. At the Sunderland Infirmary an inquest has been held on a boy aged six, who had been admitted for a burn which was shown not to have been the direct cause of death; but a necropsy disclosed extensive liver disease, caused in all probability by alcohol, as it was proved that his mother and his "granny" were in the habit of giving the boy small quantities of spirits extending over a long period. The jury came to the conclusion that the child had died from diseased liver, brought on by alcohol and want of proper nourishment. The coroner also admonished the father of the child.

The Funeral of the late Dr. Heath of Newcastle.

On Thursday last the remains of the late Dr. Heath were interred in Jesmond Old Cemetery in this city, with every manifestation of regret and respect from the profession and our general citizens. Although a blinding snowstorm came on before the funeral, the attendance was very large and representative. The procession was headed by students from the college in caps and gowns, numbering about one hundred; the members of the College of Medicine also of the College of Science, likewise in their robes, joined in, and a large number of country practitioners, old friends, and students. The floral tributes sent to Dr. Heath's memory by all classes were very beautiful and numerous. Dr. Heath at the time of his death was the oldest commissioned officer in the Yeomanry Corps, as surgeon-major. Sergeant-Major Forbes, representing the Northumberland Hussars, followed the remains.

Newcastle-on-Tyne, March 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Liability for Selling Unsound Fish.

IN Edinburgh within the past few weeks there have been one or two prosecutions for exposing to sale unsound fish. The prosecution has now been extended from the retailer of the fish to the auctioneer who sold them, and the sheriff has decided against the auctioneer, his contention being that the sections of the Act were framed to put down the traffic in unwholesome food, and he was of opinion that they were intended to reach every person through whose hands such food passed. This is an important decision, and, if it remains unquestioned, it will be an additional check of great efficacy in diminishing the admission of unsound fish at all events into the retail market patronised by the poorer classes.

Meat Inspection in Edinburgh.

It was mentioned in these columns that the Public Health Committee of the Town Council had proposed the establishment of clearing-houses for the inspection of all meat to be sold as food. The report containing this proposal has been before the Town Council, and meanwhile it has been decided to be content with the appointment of inspectors.

The Edinburgh Maternity Hospital.

The annual meeting of this hospital was held last week, the Lord Provost presiding. During the year 307 patients had been treated in the wards, and there had been 561 outdoor cases. During the year forty-one nurses had been trained. The expenditure was only £864 17*s.* 1*d.* The chairman commented upon the amount of work done for such a small sum, and thought the hospital must be conducted too economically.

Edinburgh Medical Missionary Society.

The jubilee of the Edinburgh Medical Missionary Society was held at the end of last and the beginning of the present week. Religious services of various kinds have been held, in which various eminent persons have taken part, including Archdeacon Farrar.

The winter session of the Edinburgh medical classes will end on Friday of this week. Next week the first professional examinations will begin, and the second professional the week following.

March 15th

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Banquet at the Royal College of Surgeons.

MR. H. GRAY CROLY, J.P., President of the College, gave a banquet in the Museum on Monday evening, the 14th inst., in celebration of the first biennial presidency of the College. His Excellency the Lord Lieutenant and a distinguished company, numbering nearly 200 guests, were present at the banquet. The President, in proposing "The Medical Licensing Bodies," referred to the expenditure of several thousand pounds in improving the schools attached to the College. He availed himself of the occasion, he said, to enter a public protest on behalf of the College of Surgeons and the College of Physicians against the attempt now being made to set up a degree granting monopoly for the benefit of London hospital students. They should not think of interfering with London in this matter if Irish students and teachers were afforded by this proposed university a "fair field and no favour." If the opportunity to show cause against the new Gresham University Charter were afforded they would be prepared to offer arguments which would satisfy the Government that no such monopoly of power to dispense medical degrees ought to be accorded to London or any other teaching centre.

Abolition of Visiting Physicians to Irish Lunatic Asylums.

A new rule which came into operation on Dec. 31st, 1891, is to the effect that for the future when any vacancy shall occur in the post of visiting physicians or apothecaries it shall not be filled up. This regulation has caused considerable dissatisfaction, and last week the governors of the Cork District Lunatic Asylum passed the following resolution:—"That we, the governors of the Cork District Lunatic Asylum, entirely disapprove of the new rule dispensing with the services of visiting physicians throughout Ireland, and that copies of this resolution be sent to every asylum board in Ireland." This regulation has been adopted at the suggestion of the inspectors of lunatic asylums, who recommend that in cases of special difficulty the medical superintendent may be empowered to obtain assistance from a specialist in ophthalmic and obstetric affections.

Health of Dublin in 1891.

The births numbered 9850, and the deaths 9195, or 26·3 per 1000. Both the birth- and death-rates were below the average for the previous ten years. Zymotic diseases amounted to 865, or 390 below the average for the ten years 1881–90. To measles only 5 deaths were ascribed, and it is a remarkable occurrence that of 163 cases treated in hospitals during the year not one proved fatal.

Cork District Lunatic Asylum.

From the report for the past year it appears that 1305 patients were treated during the year, of which number 100 were discharged recovered, 45 improved, 27 not improved, 1 escaped, and 69 deaths took place.

A respectable farmer, named Devlin, died on Sunday in Tullyvaughan, co. Tyrone, at the advanced age of 102 years.

March 15th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Banquet in Honour of Professor Charcot.

ON the 5th inst., at the Restaurant Durand, the establishment rendered famous as the electioneering headquarters of the late General Boulanger, the former *chefs de clinique* and *internes* of M. Charcot celebrated their renowned chief's promotion from the rank of *officier* to that of *commandeur* of the Légion d'Honneur. The hosts numbered thirty-five, and included such well-known personages as Cornil (year of service 1863), Bouchard (1864 and 1866), Bourneville (1868), Joffroy (1869), Debove (1871), Raymond, Pitres, Brissaud, Ballet, Féré, and J. B. Charcot, the guest's son. At dessert the professor's senior *interne* (Professor Cornil) rose and, in proposing the toast of the evening, depicted in eloquent terms the arduous existence led by the eminent neurologist and his first pupils in the old days when the now celebrated École de la Salpêtrière was only in embryo. So touched was M. Charcot

by the terms of the speech that he could not refrain from embracing the orator. Similar speeches having been delivered by M. Joffroy and Professor Pitres of Bordeaux, the distinguished guest returned thanks, and terminated his remarks by urging the younger members of the company to follow in the footsteps of his older pupils, and to drink to the continued prosperity of the Salpêtrière school.

The Civil versus *the Military Element at the Lyons Faculty.*

On the 7th inst. Professor Morat commenced a six months' course of physiology at the above-mentioned Faculty before an audience of 300 students. On his entrance into the theatre the professor was greeted by a volley of hisses, and such articles of consumption as potatoes and eggs—the latter being in various degrees of decomposition—were freely hurled at his devoted head. The unpopular lecturer stood to his guns for half an hour without succeeding in making his voice heard, and then discreetly beat a retreat. What was the head and front of M. Morat's offending? To enable your readers to understand the situation I must explain that there exists at Lyons, besides the Faculty, a Military School of Medicine, the students of which latter establishment being obliged to follow M. Morat's lectures, while such attendance is optional for the civilian students of the Faculty. The professor, perhaps not unnaturally, resents the consequent neglect undergone by his educational efforts at the hands of the civilians. The alleged favouritism enjoyed by the *pantalons rouges* has excited considerable ill-feeling between the civil and military students, the animosity culminating in a scene of violence at the Hôtel Dieu, where Professor Poncet had to separate the combatants. The Council of the Faculty decided to temporarily suspend the lectures, and the doors of the Faculty remained for some days closed to students of medicine, only students of the Faculty of Sciences being allowed to enter. The dissatisfied civilians took advantage of the interregnum to hold a mass meeting, at which there were passed resolutions claiming (1) equal privileges for civilian and military students; (2) the granting to civilian students of a choice of wards for clinical studies—a favour now accorded to the soldiers only; (3) the right to re-present themselves, like the military section, for examination within two or three weeks after a failure; (4) permission to attend night accouchements at the Charité Hospital, a privilege now enjoyed only by the military students; (5) the separation of the civil from the military students at special clinics; (6) an apology from the military student who struck a civilian at the Hôtel Dieu; (7) the exclusion of M. Morat from examining boards, and his replacement as a lecturer by a sub-professor. I understand that the gates of the Faculty have been reopened, but it remains to be seen if the drastic remedies embodied in the above resolutions will be adopted by the authorities. Students are proverbially sensitive, and apt to resent what they consider, often wrongly, to be an injustice. Thus at the Paris Faculty M. Gariel, the Professor of Physics, has incurred the wrath of first year students by his alleged severity as an examiner. Every year these young men are in the habit of celebrating the conclusion of the chemistry and physics classes by a *monôme*. This function, which consists in a procession along the boulevards of men marching in Indian file and holding on to each other's coat-tails, was indulged in the other day by 300 students, who, starting at 11.30 P.M. from the Hôpital St. Louis, made their noisy way towards the Quartier Latin. The cries indulged in were "*Conspuez Gariel!*" and "*Vive Blanchard!*" the last-named gentleman being a *sympathique* sub-professor, who has shown himself less critical of the attainments of more or less apprehensive candidates for examination than the perhaps too conscientious Professor of Physics. The *monômists* were dispersed by a squad of police, who were lying in ambush at the Prefecture, but the manifestation was resumed before the Faculty of Medicine.

Strontium Salts in Therapeutics.

In this country these salts have recently come greatly into favour, and seem destined henceforth to take an important place in the treatment of disease. Their therapeutic efficacy, when they respond to that paramount essential, purity of composition, would appear to be an established fact. Though hardly new to therapeutists, they are unquestionably so to therapeutics, for hitherto their frequent admixture with poisonous or deleterious substances, such as barium and other impurities, has greatly militated against their admission amongst our pharmaceutical resources. Thanks, however, to the patient investigation of Paraf-Javal, a means has been discovered of producing perfectly pure salts, and the use of such salts shows that previous ideas as to the toxic properties of strontium compounds were erroneous, and that toxic symptoms, when manifested, are in reality to be attributed to the impurities hitherto inseparable from these preparations. According to the testimony of such well-known authorities and clinical observers as Germain Sée, Dujardin-Beaumetz, Constantin Paul, Bucquoy, &c., the superiority of the lactate of strontium, when prepared after the process of Paraf-Javal, in the treatment of albuminuria, would appear to be established over all other medicaments. Again, the researches of M. Féré, in his wide field of clinical observation amongst the mental cases at the Bicêtre Hospital, have led him to the conclusion that the bromide of strontium can, in very many cases, be with advantage substituted for bromide of potassium in the treatment of epilepsy. He found that when the bromide of potassium was, from one reason or another, badly borne in doses large enough to be efficient, as often happens, the bromide of strontium was readily tolerated, showing no toxic effects, and with results equal, if not superior, to those obtained by the former salt. M. Laborde, at a recent meeting of the Therapeutic Society, while dwelling on the foregoing facts, impressed on his hearers the necessity of administering pure preparations only, and of avoiding unstable compounds of this element, such as the iodide of strontium, on which experimental pharmacology had not as yet pronounced.

Petroleum in Diphtheria.

At a recent meeting of the Academy of Medicine in Brussels M. Malson, for M. Larcher, read an interesting paper on the highly successful use of crude petroleum in diphtheria. Since 1886 M. Larcher has treated forty-two cases of this disease in this manner, and with only two deaths. Of these two, one was a very young child, which came under treatment at a very advanced period of the malady; the other being a little girl of six, with very extensive disease, who proved so intractable that it was almost impossible to make the necessary local manipulations. Of the forty successful cases, all presented well-marked diphtheritic symptoms. The treatment consisted in the energetic application of the petroleum every two hours by means of a brush, with the addition, in some cases, of sprays of carbolised water. As a result a rapid softening and shedding of the false membranes followed. In most cases the membrane reformed, but was less thick and extensive, appearing in patches, between which healthy mucous membrane appeared, finally encroaching on the patches, and permanently taking their place when the latter gave way a second time to the application. In seven of the cases there was paralysis of the soft palate. The petroleum was not found as disagreeable as might be imagined, for it was only towards the termination of the treatment that the patients began to complain of any unpleasant taste. M. Larcher concludes from the foregoing that if the future gives an analogous proportion of successful results by this method, it may be submitted with safety that—(1) Petroleum may be considered capable of curing diphtheria; (2) that its employment is unattended by any serious inconvenience; (3) that its use does not preclude other applications; (4) that the duration of the treatment varies between eight and eighteen days; and (5) that—a point of no small importance—in connexion with these forty-two cases, in no instance was there any spread of the contagion, a result not always achieved with other methods of treatment.

Paris, March 15th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Investigation of Quarantines by Congress.

THE introduction of typhus fever into this country through the port of New York has become sufficiently serious to excite the attention of Congress. The immigrants of Russian Hebrew extraction who were carriers of the pestilence have dispersed throughout the country, and new cases of typhus fever are daily reported from widely different localities. Much blame is attached to the quarantine officers at this port for allowing these immigrants to

disembark, and finally a joint resolution has been introduced into Congress directing a committee to investigate the charges made against the management of the quarantine. Probably the explanation of this misadventure will be found in the recent change of quarantine officials by the State government. The office of health officer of this port is a local political prize which is eagerly sought on every change of the political complexion of the State. If the coming investigation should result in placing the quarantines of the country under the government at Washington, with such regulations as would give permanency to their administration, the change would be in the interests of both commerce and the public health.

Typhus Fever in New York.

The typhus fever introduced by Russian Jews into this city has not gained any foothold apparently, owing to the energetic efforts of the health authorities to isolate the first cases. It is true that new cases almost daily occur in the crowded tenements, but each one is immediately removed to the hospital, thorough cleansing and disinfection secured, and thereafter a close watch is kept upon the place. As yet all of the cases are limited to the immigrants. Cases of typhus fever are still reported from distant parts of the country, but they are confined to the immigrants of the ill-fated ship from Marseilles.

A Laboratory of Hygiene.

Through the generosity of a citizen the University of Pennsylvania has been able to build and equip a Laboratory of Hygiene. The formal opening of the institution took place on Feb. 22nd. The building is arranged throughout for scientific research and instruction, and each department is adapted and equipped for its special kind of investigation. This is the first Laboratory of Hygiene established in this country, and gives promise of being very successful. The director of the Institution is Dr. John S. Billings, of the U.S. Army.

Asylums for the Chronic Insane.

The proper classification of the insane in State care into the acute and chronic gave rise to the erection of an asylum (Willand) in the State of New York for the chronic insane. This asylum proved a great success. The asylums for the acute insane were relieved of the pressure upon their space by the chronic cases, and the chronic insane received that kind of care and treatment which they specially need. Within the last year this State has, however, abandoned its former policy and converted its asylum for the chronic insane into a mixed asylum. Meantime, the States of Massachusetts and Pennsylvania have adopted the policy of separating their chronic from the acute insane, and establishing separate asylums for each class. It is believed that New York has taken a backward step.

New York, Feb. 27th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

The Pahiatua Poisoning Case.

BOXING DAY will long be remembered in the Masterton district, for a most alarming and extraordinary occurrence took place on that day. It appears that on Christmas Day last a wedding party assembled at the house of Mr. Naylor of Pahiatua, and the usual wedding breakfast was partaken of. In all, the party numbered about thirty. After the festivities were over the party dispersed, but a number again sat down on the following day (Boxing Day) as guests of Mr. Naylor. Practically the same food was partaken of, with the exception of a dish of sliced lamb. However, early on the morning of Dec. 27th the whole of the guests of the 26th (about twenty in all) were attacked with intense vomiting, diarrhœa, abdominal pain, and violent cramps. These symptoms developed for the first time twelve hours after the repast. There being no medical man immediately to hand, the local chemist was sent for, and he expressed the opinion that the symptoms were those of influenza coupled with biliousness resulting from the feasting of the previous day, and he prescribed according to his lights. Mr. Milne of Woodville, however, was then secured, and he was called in to attend the victims. He deposed at the inquest that he concluded from what he was told that the patients were suffering from an irritant poison, and that he was satisfied with the treatment adopted by the chemist, and ordered its continuance. At the same time he admitted that he had not ascertained what that treatment was, but assumed what it had been from the medicine he saw there. Being asked why he did not communicate with the police as to the fact that his patients were suffering from poison, Mr. Milne replied, "I suppose it must be put down to my ignorance or want of knowledge of the matter, and the fact that I did not think the cases sufficiently serious." It is to be regretted that he omitted to give instructions to keep some of the vomited matter. The symptoms of the victims increasing, Mr. Davenport of Woodville was sent for, and, diagnosing the cases as those of poisoning by an irritant, he administered emetics, which gave almost immediate relief to several of the guests; but on the following day most alarming symptoms developed, and Mr. Hosking was communicated with. He first saw Mrs. Peter Dickson and found her in a serious condition, convulsions having set in. Having done everything in his power to afford relief, he was hurried to the bedside of Mr. Dickson, whom he found in an unconscious state, and suffering from tetanic convulsions. Mr. Dickson died shortly after the doctor's arrival. Mr. Joseph Moore of Rockroad had died under exactly similar conditions half an hour previously. Although all the guests suffered more or less, fortunately these are the only deaths to record. So many different foods were partaken of at the dinner that it was not easy to trace the direct source of the disaster. It was reported at the time that the calamity was the result of a practical joke, some person having mixed oxalic acid with the food, thinking it was Epsom salts. Arsenical poisoning was the other theory propounded. It was supposed to have been placed in the food by a disappointed lover. The late Mr. Dickson was an old settler in the colony, and was much respected. He was the proprietor of a large drapery business, and was a prominent member of the Masonic order. The inquest has just concluded. The Government analyst stated that the analysis of the stomach and other organs led to the conclusion that the victims had died from the effects of arsenical poisoning, but that no evidence of poison could be discovered in the articles of food taken from Mr. Naylor's house. Mrs. Naylor stated that some of the roast lamb had been cut up in slices late on Christmas Eve, but was not eaten by anyone except Mr. Naylor, who took a few slices for his supper about 11 o'clock. The witness, returning home from her daughter's house early on Boxing Day morning, noticed the scullery door open, and saw a man going in the direction of the main road. She shouted out to this person, but received no reply. On going into the scullery after this incident she found the cloth over the lamb had been disturbed. The witness stated that the lamb which remained over after the Boxing Day repast was given to a cat and a dog, and that the animals became very ill shortly after eating it. The engagement between her daughter and Mr. Sedcole had existed for five years, and she was not aware of any other lover in the case. She was not aware that she had any enemies, but she knew that some of the guests had been threatened. The result of the inquest shows nothing to connect the two facts elicited—firstly, that the poison was arsenic; and secondly, that there had been bad feeling between some of the parties; and it is still left to discover who put the arsenic in the lamb. An open verdict was the result.

New Zealand.

Obituary.

GEORGE SHEARER, M.D., L.R.C.S.

WE regret to announce the death of Dr. George Shearer, of Upper Parliament-street, Liverpool. He had attended a funeral, and on his return complained of having caught a chill. His complaint soon developed into acute pneumonia, to which, despite unremitting attention, he at last succumbed. He was a gentleman of varied talents. Born at Thurso and educated at Edinburgh University, where he graduated in 1859, his career was throughout distinguished and successful. He was gold medalist in anatomy, chemistry, surgery, and materia medica, and took Sir James Simpson's silver medal in midwifery. He was an F.L.S. and lecturer on botany in the medical faculty

at the Liverpool University College, senior assistant physician to the Consumption Hospital, and lecturer on animal physiology and general biology in the School of Science. One of his first appointments was that of resident physician at Edinburgh Royal Infirmary, after leaving which he spent some years as voluntary missionary in China. Settling in Liverpool, he commenced practice about eighteen years since, and endeared himself to a very wide circle. He was the author of several works, of which the following were the most important: "The Neurosis of Sensibility," which he composed for the "Star" thesis; the "Autobiography of an Atom of Carbon;" and in 1881 an "Essay on the Best Means of Curing the Opium Habit," which carried off a £50 prize. His obliging disposition and engaging manner, together with his ability, enabled him to make friends of all his professional brethren.

BEN. TYDD HEUSTON, L.R.C.P. & S. EDIN., WESTERN AUSTRALIA.

INFORMATION has just been received by his friends in this country of the death of Mr. Ben. Tydd Heuston, surgeon in the Colonial Medical Service, and resident magistrate of the district of Derby in Western Australia. The name will recall to many of his old classmates the bright face and jovial manner of their erstwhile companion, who has been cut off in the pride of manhood at the early age of forty-two. A native of Ireland, he received his medical education in Edinburgh. After practising for some years in Dunse, in the south of Scotland, he joined the Colonial Medical Service, and for fourteen years was stationed in the Falkland Islands. Thereafter he was transferred to the south of Western Australia, and held appointments at Busselton, Pinjarrah, and Derby. On his arrival in Western Australia his abilities were soon recognised by the Premier, and he was appointed resident magistrate, first in Pinjarrah, near Perth, and afterwards promoted to Derby. He was highly esteemed by the whole community, to whom his sudden death from apoplexy came as a great shock. Much sympathy has been expressed by all, from the Premier downwards, for his widow and family of four young children. His loss will be very much felt in the district.

Medical News.

UNIVERSITY OF OXFORD.—At a congregation held last week the following degree was conferred:—

Doctor of Medicine.—Walter J. Turrell, Turrell's Hall.

UNIVERSITY OF CAMBRIDGE.—A synopsis of the regulations for the examination in Sanitary Science of the University has just been issued. Two examinations in so much of State Medicine as is comprised in the functions of medical officers of health will be held during the year 1892 in Cambridge, beginning on the first Tuesday in April and in October respectively, and ending on the following Friday, or at latest on the following Saturday. With certain provisions, any person whose name is on the Medical Register of the United Kingdom may present himself for this examination. The names of candidates, with the necessary certificates, should be sent to the registrar, W. Clark, Esq., on or before March 29th.—At a congregation held last week Dr. Corfield (Oxford), Dr. A. Ransome (Gonville and Caius), Dr. J. L. Notter (Dublin), and Dr. Thorne Thorne (London) were appointed examiners in State Medicine. At the same meeting the following degrees were conferred:—

Doctors of Medicine.—Gerald Crowfoot Fitzgerald, Gonville and Caius; Arnold Clarkson Ingle, non-collegiate.

Bachelors of Medicine and Bachelors of Surgery.—Herbert Edward Durham, King's; Joseph George Hulbert and Frederick Meadows Turner, Trinity; Edward Hugh Edwards Stack, Pembroke; Maurice Craig and Thomas Wilfred Scott, Gonville and Caius; Joseph Beckett Gillam and Sidney Herbert Lee, Downing.

The examinations for Medical and Surgical Degrees in the Easter term will commence on the following dates:—Third Examination for M.B. degree, Parts I. and II., Tuesday, April 26th; Master of Surgery, Friday, April 29th. Second Examination for M.B., Part I., Monday, June 13th; Part II., Tuesday, June 7th. First Examination for M.B., Part I., Tuesday, June 7th; Part II., Thursday, June 9th.

ROYAL INSTITUTION.—Dr. B. Arthur Whitelegge will, on Thursday next (March 24th), begin a course of three lectures on "Epidemic Waves."

FOOTBALL CASUALTY.—Whilst playing in a game last week in the Pinderfields-road Recreation Ground, Wakefield, a young man aged twenty fractured his leg.

CITY OF LONDON AND EAST LONDON DISPENSARY The annual report for 1891, read at the meeting of the governors on the 16th inst., Earl Manvers in the chair, states that 37,352 patients were treated during the year, of whom 1716 were free, the renewals being 26,553. The cash statement shows a balance in hand of £357 4*s.* 11*d.*

BURNING OF A LUNATIC ASYLUM AT JACKSON, MISS.—The four-storey main building of the State Asylum for the Insane was set on fire on Feb. 10th by an inmate of the institution. There were 600 inmates in the building, most of whom were asleep when the flames were discovered Through the exertions of the superintendent, Dr. Mitchell and his subordinates all were saved and safely transferred to the wings disconnected from the burning pile.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD.—For nearly eighty years the benefits of this charity have been bestowed in the midst of densely populated districts of the metropolis, and the work is daily increasing. The new wing now completed, while increasing the usefulness of the hospital, will necessarily add to the cost of maintenance. The report for the past year read at the meeting of the court of governors on the 14th inst. states that the reliable income is quite insufficient to meet the expenditure.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.—This institution, which has carried on its benevolent work for upwards of twenty-two years, maintains its sphere of usefulness; 722 in-patients were treated during the past year, making a total number of 11,029 since the hospital was established. The year's income, including £1104 from legacies, was £10,103 18*s.* 11*d.*, while the expenditure amounted to £10,941 7*s.*, the increase being largely owing to heating and ventilating improvements. Her Majesty the Queen has become an annual subscriber of £10.

YORK COUNTY HOSPITAL.—The Dean of York presided at the annual meeting of the governors held on the 8th inst. The in-patients treated in 1891 were more by sixty-six than the previous year. The training school for nurses continues to make satisfactory progress. The year's fees amounted to £212 5*s.*; the net income, exclusive of legacies, was adequate to provide for the expenditure; the annual subscriptions, which rose at a bound as the result of special efforts two years ago, had been sustained. From legacies the receipts exhibit a total of £1968. Plans for certain improvements, involving an estimated cost of £4314, were approved.

THE GENERAL INFIRMARY, LEEDS.—The annual report for 1891 just issued shows a large addition to the number of in- and out-patients treated at the infirmary and the Ida Hospital. The horse ambulance continued to be of great service, and was called into requisition on 498 occasions. The treasurer's revenue account showed that the receipts were £20,154 12*s.* 6*d.*, while the total expenditure for maintenance in the infirmary and the Ida Hospital was £20,894. The new buildings of the infirmary are rapidly approaching completion, and will be ready for occupation in a few months. The maintenance of the new hospital, it is estimated, will cost at least £5000 per annum more than the present establishment.

VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.—The annual report for the past year states that since the establishment of the pension fund for all nurses in the employment of the hospital eleven nurses have joined the fund; that 885 children had been treated in the wards of the hospital; 196 were sent to the convalescent branch at Margate, and there were 44,408 attendances in the out-patients' department. Anæsthetics were given on 972 occasions, for operations and medical examinations. The home at Broadstairs will be ready for the reception of patients early in April, but a further sum of £1500 is still required to enable it to be opened free from debt. The reduction of the charge of endowing a cot in the hospital from £1000 to £500 has been agreed to.

DR. MACPHERSON LAWRIE, J.P. Dorset, has been elected a member of the Dorsetshire County Council.

SUPERANNUATION GRANT. — Mr. G. H. Davis, L.R.C.P. Edin., M.R.C.S., lately medical officer of the fourth district of the Bradfield Union, has been granted a superannuation allowance of £27 17*s.* per annum.

PRESENTATION.—Mr. J. M'N. O'Keeffe, L.R.C.P., L.R.C.S. Edin., was presented on Monday with an illuminated address and a cheque by a large number of his fellow townsmen, in recognition of the valuable public services he had rendered to the borough.

ANOTHER CENTENARIAN.—A correspondent telegraphs: "'Granny' Morphew, the well-known centenarian of Ham, Surrey, died to-day (Tuesday) at the age of 106. She had lived at Ham nearly all her life, had been confined to her bed for a comparatively short time, and retained her mental faculties to the last."

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.—The following donations, among others, have already been promised:—His Grace the Duke of Westminster, £1000; Ludwig Mond, Esq., £2000; Sir Joseph Lister, Bart., £300; Sir William Roberts, F.R.S., £300; Sir Henry Roscoe, £100; Dr. M. Armand Ruffer, £100; the Right Hon. the Earl of Derby, £1000; His Grace the Duke of Devonshire, £1000; Dr. P. H. Pye-Smith, £105.

A NEW MEDICAL SOCIETY.—A Society having the name of the Bolton and District Medical Society has been formed in Bolton. The following are the list of office-bearers. President: F. B. Mallett, M.D., J.P. Vice-Presidents: James Robinson, M.D., and Mr. J. Johnson Martin. Hon. Secretary: Nathan Raw, M.D. Hon. Treasurer: Peter Yates, M.D. Hon. Librarian and Editor: J. Hilton Thompson, M.D. Committee: Mr. E. M. Garstang, J. Johnston, M.D., Mr. A. Kershaw, Mr. H. Murphy, J. E. Panton, M.D., and Mr. G. Patrick.

WARNEFORD HOSPITAL, LEAMINGTON. — Lord Leigh occupied the chair at the annual meeting held last week. The annual report, the fifty-seventh, stated that the erection of the new wing would cost altogether upwards of £14,000. This would exhaust the resources at the disposal of the committee for building purposes, and to carry out the whole proposed scheme additional funds were required. The financial statement was read by the secretary, and in moving the adoption of the report, which was carried, his lordship advocated a registration fee, the provision of a ward for paying patients, and that all patients should be allowed tea and sugar free.

THE St. Mary's Hospital Athletic Club's dinner was held on Tuesday last at the Holborn Restaurant. The dean of the medical school, Mr. George P. Field, presided, supported by about 150 of the staff and students. Messrs. Moon and Wall responded for football, Mr. Poynton for cricket, Mr. G. Mould for athletics, and Captain A. Thorne for the shooting club. The toast of the staff was proposed by Mr. H. E. Lawrence and responded to by Dr. Maguire. Dr. Sidney Phillips proposed the chairman, who congratulated the association football team in playing a drawn game (one goal all) with St. Bartholomew's in the final tie. The chairman also announced that he had just heard from Dr. Broadbent that the Prince and Princess of Wales were coming in October next to lay the foundation stone of the new buildings in Praed-street, and that their Royal Highnesses had consented to call the new portion of the hospital "The Clarence Memorial Wing," in memory of the late Duke of Clarence. The governors had already spent £45,000 in buying the land and houses. About 100 beds would be added to the hospital, and there would also be provided a nurses' home, special wards and lying-in wards, a new out-patient department, and also a presidential college in the hospital grounds. His Royal Highness Prince George of Wales had also that day consented to be president of the hospital.

MEDICAL NOTES IN PARLIAMENT.

Metropolitan Hospitals Committee.

IN the House of Lords on Tuesday, March 15th, the Earl of Kimberley, in the absence of Lord Sandhurst, moved that a Select Committee be appointed to consider the evidence taken during the sessions of 1890 and 1891 with regard to all hospitals and provident and other public dispensaries and charitable institutions within the metropolitan area &c., and to report thereon to the House; and that the following lords be named of the committee: The Archbishop of Canterbury, Earl Cadogan, the Earl of Winchilsea, the Earl of Lauderdale, Earl Spencer, Earl Cathcart, the Earl of Kimberley, Lord Zouche, Lord Saye and Sele, Lord Clifford of Chudleigh, Lord Sandhurst, Lord Fermanagh, Lord Lamington, Lord Sudeley, Lord Monkswell, and Lord Thring.—The motion was agreed to.

Registration of Midwives.

In the House of Commons, on Thursday, the 10th inst., Mr. Balfour, in reply to Mr. Pease, said the Government had no objection to the appointment of a Select Committee to inquire into the question of the registration of midwives.

Surgery Professorship at Netley.

Sir W. Foster asked the Secretary of State for War whether it was the intention of the authorities to second Brigade-Surgeon-Lieutenant-Colonel Godwin, about to be promoted as Surgeon-Colonel, while holding the appointment of Professor of Military Surgery at the Royal Victoria Hospital, Netley.—Mr. E. Stanhope: The officer in question is not seconded in his rank, but is made supernumerary to the medical staff. His appointment to a professorship therefore causes no reduction in the number of medical officers.

The Metropolitan Water-supply.

The names of the Commissioners appointed on the Royal Commission to consider the question of the Metropolitan Water-supply are—Lord Balfour of Burleigh (chairman), Sir George Barclay Bruce, C.E., Professor James Dewar, F.R.S., Sir Archibald Geikie, Mr. George Henry Hill, C.E., Mr. James Mansergh, C.E., and Dr. William Ogle, F.R.C.P.—The reference which the Commission has to consider is "Whether, taking into consideration the growth of the population of the metropolis, and the districts within the limits of the metropolitan water companies, and also the needs of the localities not supplied by any metropolitan company, but within the watersheds of the Thames and the Lea, the present sources of supply of these companies are adequate in quantity and quality, and, if inadequate, whether such supply as may be required can be obtained within the watersheds referred to, having due regard to the claims of the districts outside the metropolis, but within those watersheds, or will have to be obtained outside the watersheds of the Thames and the Lea."

Police and Sanitary Regulations Bills.

On Thursday, the 17th, in the House of Commons a number of instructions were adopted for the use of the Select Committee on Police and Sanitary Regulations Bills. One was to the effect that the Committee shall not sanction in any Bill referred to them any clauses relating to matters which are the subject of provisions in "The Infectious Disease Notification Act, 1889," "The Public Health Acts Amendment Act, 1890," "The Infectious Disease (Prevention) Act, 1890," or "The Museums and Gymnasiums Act, 1891," unless the Committee report that the insertion of such clauses ought to be allowed, with the reasons on which their opinion is founded. Dr. Farquharson, while not objecting to this instruction, emphasised the need for the Committee having a wide discretionary power, and reminded the House that many important provisions in our health legislation had been initiated in private Bills which had passed the scrutiny of this Committee. The President of the Local Government Board assured the hon. member that there was no desire on the part of the Government to interfere with the good work done by this Committee.

The Opium Trade.

Colonel Hughes presented a petition signed by 17,965 inhabitants of India against the growth of the poppy and the common sale of opium.

A Dangerous Practice.

Colonel Malcolm put a question to the President of the Board of Agriculture with reference to the practice of throwing over carcases from cattle ships in the immediate proximity of our coasts. Mr. Chaplin, in the course of his reply, said that any person who threw the carcase of an animal which died from disease, or was slaughtered in consequence of disease, into the sea within three miles of the shore was liable to a penalty. In the event of his becoming aware of the commission of such an offence he would at once take steps for proceedings against the offender. It was obvious, however, that the offence was one difficult to discover.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at Midnight on March 15th, 1892.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total	
Eastern Hospital	190	58	—	20	..	268	442
North-Western Hospital	173	49	—	12	2	236	411
Western ,,	92	27	—	5	1	125	224
South-Western ,,	177	37	—	14	..	228	350
South-Eastern ,,	215*	14	—	28	3	260	424
Northern ,,	304	19	..	9	...	332	480
Totals	1151	204	..	88	6	1449	2331

* Infant with mother.

SMALL-POX.—*Atlas* hospital ship, 13.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BAINES, EUSTACE, M.B., C.M. Durh., has been appointed Clinical Assistant to the St. Marylebone Infirmary, vice S. Hillier.

BOWMAN, H. M., M.D. Lond., M.R.C.S., has been appointed Senior House Physician to the National Hospital for the Paralysed and Epileptic (Albany Memorial), Bloomsbury, vice W. H. R. Rivers, resigned.

BREMNER, JAS., M.B., C.M. Aberd., has been appointed Medical Officer for the Eastern Sanitary District of the Strand Union, vice Welch, resigned.

CHAMBERS, A. R., M.D., M.Ch. Irel., has been reappointed Medical Officer of Health for the Long Eaton Urban Sanitary District.

COLLINS, RICHARD HAWTREY, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Poplar Hospital, vice R. D. Muir.

DAWSON, W. H., M.D. Durh., M.R.C.S., has been appointed Medical Officer of Health for Great Malvern, vice Tyrrell, resigned.

ESKRIGGE, R. B., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Roystone and Carlton Townships of the Barnsley Union.

FENNINGS, ARTHUR ALLEN, M.B., B.S., M.R.C.S., L.R.C.P., has been appointed Junior Medical Officer to the Camberwell House Asylum.

GIBSON, CHARLES, M.D., L.R.C.P., has been appointed Physician to the Royal Bath Hospital and Rawson Convalescent Home, Harrogate.

HENRY, G. F., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for St. James's Parish, Bury St. Edmunds.

HILLIER, S., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the Paddington Infirmary, Harrow-road.

HODGES, JAS., M.R.C.S., has been appointed Medical Officer for St. Mary's Parish, Bury St. Edmunds.

HUNTER, A., M.B., C.M. Aberd., has been appointed Junior Assistant Medical Officer to the Montrose Royal Asylum.

LIDDELL, JOHN, M.D., has been appointed Physician to the Royal Bath Hospital and Rawson Convalescent Home, Harrogate.

MILLIGAN, H. N. D., M.B., C.M. Edin., has been appointed Junior House Surgeon to the Bradford Infirmary.

MORRIS, H. C. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Hambleden Sanitary District of the Henley Union, vice Deane, resigned.

NEALE, A. E., M.B., B.S. Durh., has been appointed Medical Officer for the Stotfield Sanitary District of the Biggleswade Union.

ORCHARD, T. N., M.D., M.C., has been appointed Divisional Police Surgeon for West Salford, vice A. W. Stocks.

ROBSON, C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Pembridge Sanitary District of the Kington Union.

SNOAD, E. H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Aylestone and Knighton Sanitary District of the Leicester Union.

TANNER, C. E., M.D. Durh., F.R.C.S. Eng., has been reappointed Medical Officer for the North and Seal Sanitary Districts of the Farnham Union.

WEBB, C. FRERE, M.D. Durh., F.R.C.S., F.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health and Medical Officer for the First Sanitary District of the Basingstoke Union.

WOOD, GUY E. M., M.B., M.R.C.S., L.R.C.P., has been appointed Junior House Physician to the National Hospital for the Paralysed and Epileptic (Albany Memorial), Bloomsbury, vice H. M. Bowman, M.D.

WRENCH, E. B., L.S.A., has been appointed Deputy Vaccination Officer, Bakewell.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—House Surgeon. Board, lodging, fuel, and light provided.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants. (Apply to the Clerk, Bridewell Hospital, New Bridge-street, E.C.)

BRADFORD INFIRMARY.—Dispensary Surgeon. Salary £100 per annum, with board and residence.

BUCKINGHAMSHIRE GENERAL INFIRMARY, Aylesbury.—Resident Surgeon and Apothecary, unmarried. Salary £80 for the first year, with an advance of £10 per annum, up to £100, with board and lodging, washing, coals, and candles, in furnished apartments.

CHARING-CROSS HOSPITAL, London.—Pathologist and Curator. Salary £100 per annum.

CITY OF LIVERPOOL INFECTIOUS DISEASES HOSPITALS, Netherfield road and Grafton-street.—Resident Medical Officer at the City Hospital North, Netherfield-road, and at the City Hospital South, Grafton-street, at a salary of £100 per annum each, increasing £10 per annum to £120 as a maximum (subject to a contribution of £5 per cent. to the Superannuation Fund), together with board, washing, and lodging at the hospital in each case. (Apply to the Town Clerk, Town Clerk's Offices, Liverpool.)

DERBYSHIRE ROYAL INFIRMARY.—Resident Assistant House Surgeon for six months. Salary for the six months £10. Separate apartments, board, and washing provided.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—Assistant Surgeon.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House Surgeon (unmarried). Salary £50 per annum, with board, lodging, and washing.

LONDON HOSPITAL, Whitechapel-road, E.—Surgical Registrarship. Salary £100 a year.

LOW MOOR COMPANY.—Resident Medical Officer. Salary £300, inclusive of all expenses, dispensing, drugs, &c. (Applications, by letter only, to the Chairman, Low Moor Iron Works, Bradford.)

NORTH RIDING ASYLUM, Clifton, York.—Second Assistant Medical Officer. Salary £100 a year. Board, apartments, washing, and attendance.

PARISH OF BIRMINGHAM WORKHOUSE INFIRMARY.—Resident Assistant Medical Officer and Resident Assistant Surgical Officer for the Workhouse Infirmary. Salary £100 per annum each, with furnished apartments, rations (exclusive of alcoholic liquors), coal, gas, washing, and attendance. (Apply to the Clerk, Parish Offices, Edmund-street, Birmingham).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Election to the Court of Examiners.

ROYAL FREE HOSPITAL, Gray's-inn-road.—Senior Resident Medical Officer for twelve months. Salary £100 per annum, with board and residence in the hospital.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at the rate of £40 per annum, with board and lodging.

ROYAL PIMLICO DISPENSARY, 104, Buckingham-palace-road, S.W.—Resident Medical Officer and Assistant Secretary. Salary £100 per annum, with percentage on payments by members (usually about £70 per annum). Unfurnished house, free of rates and taxes, with gas, and two-thirds of coal.

SALFORD UNION.—Assistant Medical Officer for the Union Infirmary, Hope, near Eccles. Salary £130 per annum, with furnished apartments in the Infirmary. (Apply to the Clerk, Union Offices, Eccles-new-road, Salford.)

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—House Surgeon for the Branch Hospital, Royal Victoria and Albert Docks, E. Salary £100 per annum, with board and residence.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—Junior House Surgeon for the Branch Hospital, Royal Victoria and Albert Docks, E. Salary £80 per annum, with board and residence.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Honorary Assistant House Surgeon.

SUSSEX COUNTY ASYLUM, Hayward's-heath.—Junior Assistant Medical Officer. Salary £100 a year, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing in the hospital.

TOWNSHIP OF MANCHESTER.—Resident Assistant Medical Officer at the Workhouse, near Crumpsall, for twelve months. Salary £100 per annum, with furnished apartments, fire, light, washing, and attendance. (Apply to the Clerk, Poor-law Offices, New Bridge-street, Manchester.)

Births, Marriages, and Deaths.

BIRTHS.

CLAREMONT.—On March 8th, at Petersleigh, Elm-grove, Southsea, the wife of Dr. Claude C. Claremont of a daughter.

DANIELL.—On March 10th, at Croydon-road, Anerley, the wife of Henry P. Daniell, L.R.C.P. and M.R.C.S., of a daughter.

GLYNN.—On March 1st, at Rodney-street, Liverpool, the wife of T. R. Glynn, M.D., of a son.

TERRY.—On March 14th, at 16, Green-park, Bath, the wife of Henry G. Terry, M.R.C.S., F.R.C.S.E., of a son.

TREND.—On March 6th, at Grosvenor-square, Southampton, the wife of Theophilus W. Trend, M.D., of a daughter.

VERRALL.—On March 6th, at Montpellier-road, Brighton, the wife of T. Jenner Verrall, M.R.C.S., L.R.C.P., of a daughter.

WALLACE.—On March 10th, at Harley-street, W., the wife of Dr. A. Wallace of a daughter.

MARRIAGES.

BERNAU—LOVELL.—On March 10th, at Holy Trinity Church, Tulse-hill, Surrey, by the Rev. E. L. Roxby, M.A., Vicar, Henry F. Bernau, M.R.C.S., L.R.C.P., of Park House, East Finchley, son of the late A. F. Bernau, of Tulse-hill, to Amy, daughter of John C. Lovell, of Tulse-hill.

CUNDELL—ECKHARD.—On March 12th, at St. Luke's, Kew Gardens, William H. Cundell, M.R.C.S., L.S.A. Lond., of The Avenue, Kew Gardens, to Fanny, daughter of Mrs. Eckhard, of Ashfield, Kew.

YEATES—SCOTT.—On March 14th, at Chilton Foliatt, near Hungerford, Robert Andrew Yeates, M.B., Indian Medical Service, younger son of the Rev. George Yeates, Rector of Lissan, county Derry, to Sophia Marcia, eldest daughter of the Rev. Thomas James Scott, Rector of Chilton Foliatt.

DEATHS.

DUKES.—On March 15th, at Marquess-road, Canonbury, Esquire Dukes, Surgeon, in his 80th year.

MILNER.—On March 8th, at The Warren, Micheldever, Hants, Edward Milner, Esq., of New Cavendish-street, London, Surgeon to the Lock Hospital, aged 40.

REED.—On March 11th, at Hertford-street, Mayfair, London, W., Frederick George Reed, M.D., F.R.C.S., M.R.C.P. (formerly of Hertford), in his 73rd year.

TAYLOR.—On March 6th, at Montreux, Switzerland, Thomas Taylor, F.R.C.S., of Warwick-place, Grove-end-road, N.W., aged 78.

WIGMORE.—On March 6th, at Davos, Switzerland, Frederic H. Wigmore, M.B. Cantab., late of Macclesfield, aged 31.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

AMERICAN OPHTHALMOLOGICAL SOCIETY, Hartford, U.S.A.
Transactions of the American Ophthalmological Society. Twenty-seventh Annual Meeting. 1891. pp. 241.

BLAKISTON, SON, & CO., Philadelphia.
A Manual of Autopsies. By J. W. Blackburn, M.D. Illustrated. 1892. pp. 84.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London; and LEONARD & COMPANY, Detroit.
Dictionary of Materia Medica and Therapeutics. By C. Henri Leonard, A.M., M.D., and Thomas Christy, F.L.S. 1892. pp. 387.

CHURCHILL, J. & A., New Burlington-street, London.
Uric Acid as a Factor in the Causation of Disease. By Alex. Haig, M.D. Oxon., F.R.C.P. Illustrated. 1892. pp. 272.

DORNAN, W. J., Philadelphia.
Transactions of the American Gynæcological Society. Vol. XVI., for the year 1891. pp. 574.

ELLIS, G. H., Boston, Mass.
The Etiology, Pathology, and Treatment of Diseases of the Hip-joint. By Robt. W. Lovett, M.D. 1891. pp. 220.

KEGAN PAUL, TRENCH, TRÜBNER, & Co., Charing-cross-road, London.
Laboratory Practice. A Series of Experiments on the Fundamental Principles of Chemistry. A Companion Volume to the New Chemistry. By J. P. Cooke, LL.D. 1892. pp. 192.
B. Bradshaw's Dictionary of Bathing-places, Climatic Health Resorts, &c. With a Map. 1892. pp. 410. Price 2s. 6d.

LEA BROTHERS & Co., Philadelphia.
Human Monstrosities. By B. C. Hirst, M.D., and G. A. Piersol, M.D. Part II. Illustrated. 1892. pp. 112.

LONGMANS, GREEN, & Co., London.
The Human Mind. A Text-book of Psychology. By James Sully, M.A., LL.D. In Two Volumes. pp. 501 and 393.

MACMILLAN & Co., London.
The Dietetic Value of Bread. By John Goodfellow, F.R.M.S. 1892. pp 328. Price 6s.

METHUEN & Co., Bury-street, London.
Air and Water. By V. B. Lewes, F.I.C., F.C.S. Illustrated. 1892. pp. 182. Price 4s. 6d.

PENTLAND, YOUNG J., Edinburgh and London.
Geographical Pathology: an Inquiry into the Geographical Distribution of Infective and Climatic Diseases. By A. Davidson, M.D., L.R.C.P. Edin. Two Volumes. 1892. pp. 1005.

PRITCHARD, C. J. A., Calcutta.
The Medical Register and Directory of the Indian Empire, 1892 By Jas. R. Wallace, M.D.

STEINHEIL, G., Paris.
Les Tumeurs de la Vessie. Par J. A'barran; Préface par le Professeur F. Guyon. 1892. pp. 494.

TAYLOR & FRANCIS, Red Lion-court, Fleet-street, London.
Museum of the Royal College of Surgeons of England: Catalogue of Osteological Specimens. Part III.: Aves. By R. B. Sharpe, LL.D. 1891. pp. 469.

WRIGHT & Co., Bristol, and SIMPKIN, MARSHALL, & Co., London.
Miners' Nystagmus. By Simeon Snell, F.R.C.S. Edin. 1892. pp. 143. Price 6s.
The Medical Annual, 1892. pp. 783. Price 7s. 6d.

Index Medicus: Authors and Subjects; Vol. XIV., No. 1, January, 1892 (Trübner & Co., and Lewis, London).—Service des Enfants Trouvés de Notre Dame de Pera; par le Dr. Spiridion C. Zavitziano (Imprimeur de la Société Impériale de Médecine, Galata, Constantinople, 1892).—Grundriss einer Klinischen Pathologie des Blutes; von Dr. R. R. v. Limbeck (Gustav Fischer, Jena, 1892).—California, its Life and Climate; by an Englishman and an Anglo-Californian (W. W. Gibbings, Bloomsbury, London); price 6d.—The Interpretation of Disease. Part II.: The Lessons of Acute Disease; by H. C. Gillies, M.B. (D. Nutt, Strand, London, 1892); price 1s. net.—Catalog der Firma H. Windler (Inhaber: Hermann Windler und Georg Windler, Berlin, N.W., 1892).—Higiene de la Vista y Causas de la Ceguera; por el Dr. Juan Gelpi y Jofre (E. Ullastres y Ca., Barcelona, 1892).—Il Triennio di Prova del Regolamento 29 Marzo, 1888, sulla Profilassi e sulla Cura delle Malattie Sifilitiche e sulla Prostituzione al Dispensario Celtico di Pavia; Nota del S. C. Prof. A. Scarenzio (Milano, 1892).—Del Mezzo di Cura più Sicuro della Sifilide Costituzionale; Lettura dal Prof. A. Scarenzio (Milano, 1891).—Catechism Series: Physiology. Part I.: Chiefly Histology (E. & S. Livingstone, Edinburgh, 1892); price 1s. net.—Illustrated Catalogue of the Military Equipment Stores and "Tortoise" Tents Company, Limited (Offices, 49, Pall Mall, London, 1892); price 1s.—Erfahrungen über die Gallensteinkrankheit, mit und ohne Icterus; von Professor Riedel in Jena (A. Hirschwald, Berlin, 1892).—Microscopical Observations on the Hæmotozoon of Malaria; by Surgeon P. Hehir, M.D., F.R.C.S.E.; illustrated (Hyderabad).—On Uncontrollable Drunkenness considered as a Form of Mental Disorder; by L. Forbes Winslow, M.B. Cantab., M.R.C.P. Lond. (Henderson & Spalding, London, 1892); price 1s.—Der Comfort des Kranken; von Dr. Martin Mendelsohn, Berlin (A. Hirschwald, Berlin, 1892).—Cocoa: all about it; by Historicus (Sampson Low, Marston, & Co., London, 1892); price 1s.—Die Behandlung der Tuberkulose mit Tuberkulocidin; Vorläufige Mittheilung von Professor Dr. E. Klebs (Leopold Voss, Hamburg und Leipzig).—Nouvelles Doctrines de Neuropathologie; par le Dr. Caubet; Examen Critique par le Dr. L. Chabbert (Bureaux du Progrès Médical, Paris, 1892).—Concerning the Kinsmen and Friends of Insane Patients; by F. A. Elkins, M.B. (Oliver & Boyd, Edinburgh, 1892).—Nineteenth Annual Report of the Govan Parochial Asylum for the year 1891.

Medical Diary for the ensuing Week.

Monday, March 21.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
ROYAL COLLEGE OF SURGEONS.—4 P.M. Professor Charles Stewart: The Physiological Series of Comparative Anatomy in the College Museum.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Mr. T. P. Pick: Injury to Median Nerve; Operation; Restoration of Function. Dr. M. Murray: Multiple Sarcomatous Tumours.—Mr. E. Owen: Infant after Acute Epiphysitis.—Dr. T. C. Fox: Three cases of Senile Tuberculosis of the Skin.—Mr. C. B. Lockwood: Case of Nephrectomy.—Mr. W. H. Battle: (1) Compound, Comminuted, Depressed Fracture of the Skull treated by Trephining and Replacement of Bone; (2) Result of Partial Removal of the Clavicle for Necrosis.—Mr. Sheild: Spina Bifida Occulta; Necrosis of Foot and Talipes.

Tuesday, March 22.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor V. Horsley: The Brain.
ROYAL COLLEGE OF PHYSICIANS (Examination Hall, Victoria Embankment).—5 P.M. Dr. Sidney Martin: Chemical Pathology of Diphtheria compared with that of Anthrax, Infective Endocarditis, and Tetanus. (First Goulstonian Lecture.)
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Mr. Richard Barwell: The Operative Treatment of Congenital Dislocation of the Hip.—Mr. Rickman John Godlee: A case of Ligature of the Second Part of the Left Subclavian Artery for the Cure of an Axillary Aneurysm.

Wednesday, March 23.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.
CHARING-CROSS HOSTITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.
ROYAL COLLEGE OF SURGEONS.—4 P.M. Professor Charles Stewart: The Physiological Series of Comparative Anatomy in the College Museum.
HUNTERIAN SOCIETY.—8.30 P.M. Mr. A. H. Tubby: The Treatment of Compression Paraplegia following Pott's Disease.—Dr. F. J. Smith: On Three cases of Intestinal Obstruction.

Thursday, March 24.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Dr. B. A. Whitelegge: Epidemic Waves.
ROYAL COLLEGE OF PHYSICIANS (Examination Hall, Victoria Embankment).—5 P.M. Dr. Sidney Martin: Chemical Pathology of Diphtheria compared with that of Anthrax, Infective Endocarditis, and Tetanus. (Second Goulstonian Lecture.)
BRITISH GYNÆCOLOGICAL SOCIETY.—Inaugural Address by the President (Professor Alexander Simpson).—Dr. Fancourt Barnes: Ovariotomy in a Patient over Seventy-two. Specimens:—Mr. Bowreman Jessett: Nephrotomy in a Woman with One Kidney.—Dr. Granville Bantock: Nephrectomy for Hydronephrosis.
CHELSEA HOSPITAL FOR WOMEN.—5 P.M. Dr. Hugh Fenton: Sterility.
SOCIETY OF ARTS.—4.30 P.M. Mr. G. H. M. Batten: The Opium Question.

Friday, March 25.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION (Rooms of the Medical Society, 11, Chandos street, W.).—General Meeting.
CANCER HOSPITAL (Fulham-road, S.W.).—4 P.M. Mr. W. H. Flam: Sarcoma of the Breast.
ROYAL COLLEGE OF SURGEONS.—4 P.M. Professor Charles Stewart: The Physiological Series of Comparative Anatomy in the College Museum.
CLINICAL SOCIETY OF LONDON.—Living Specimens at 8 P.M. Mr. Stanley Boyd: (1) A case of Suture of the Musculo-spiral Nerve; (2) Three cases of Compound Ganglion treated by Complete Excision.—Mr. Frederic Eve and Mr. L. A. Lawrence: Two cases showing Results of Skin Grafting by Thiersch's Method after Removal of Rodent Epithelioma of Nose and Face.—Dr. Ord: (1) Two cases of Leucocythæmia; (2) A case of Unusual Eruption on the Chest.—Mr. Arbuthnot Lane: A case of Macrocheilia treated successfully by Electrolysis.—Dr. Arthur Davies: A case of Transposition of Viscera with Morbus Cœruleus in a Boy aged eight years. Papers at 9 P.M. Dr. Burney Yeo: On Cardiac Asthenia following Influenza.—Mr. Howard Marsh: A case in which an Affection of the Kidney presented Points of Resemblance to the Phenomena observed in Raynaud's Disease.—Dr. Washbourn and Mr. Arbuthnot Lane: Floating Kidney; New Mode of Nephrorrhaphy.
ROYAL INSTITUTION.—9 P.M. Mr. John Evans: Posy Rings.

Saturday, March 26.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
ROYAL INSTITUTION.—3 P.M. Prof. J. F. Bridge: Dramatic Music.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

TO OUR READERS.

INSET ADVERTISEMENTS.

OUR attention has been called by a correspondent, to whom we offer our best thanks, to a practice most reprehensible, as we venture to think, but which, though it appears to affect us in a measure, we have no power whatever to control. We refer to the introduction into copies of THE LANCET of fly-sheet advertisements inserted between the pages of the journal. Advertisements which have been refused admission to our pages are sometimes thus surreptitiously inserted when the issue has passed out of our hands into those of the newsvendor. We trust that our readers will for the most part see through this transparent artifice, and be so far from giving credit to an advertisement on any such ground as rather to regard it as a suspicious circumstance that the connexion of the advertisement with THE LANCET should be of so adventitious a kind. Such advertisements as we think it right to publish do not appear in the leaflet form, and although we cannot, as we have said, control the action of the newsvendors, we can at least denounce the practice, and invite our readers to withdraw their custom unhesitatingly and at once from any tradesman who adopts it.

SMALL BUT IMPORTANT DETAILS.

To the Editors of THE LANCET.

SIRS,—In his excellent and practical paper on Piles at the Medical Society Dr. Lauder Brunton calls attention to the dangers of the ordinary w.c., not only in this but in other more serious illnesses. The window of the closet is usually kept open in all weathers, and frequently there is a strong up-draught of intensely cold air from the pan. During the late epidemic I have known many lives endangered by a visit to a cold and draughty w.c. when the patient has been in a profuse perspiration and suffering from pneumonia after influenza. A few simple remedial precautions are within the reach of all; first, let the window be always shut at night, and if possible a small jet of gas left burning, or a small paraffin lamp be placed on the floor; secondly, a can of hot water should be poured into the closet pan just before its use. If the air be damp and cold, the temperature of so small a chamber may be easily raised *pro tem.* by very carefully lighting and flaring a piece of newspaper in it, or by keeping in the closet a large can of boiling water, which may be renewed every few hours. These may, to some, appear absurdly trivial details, but on such apparent trifles a life may, and often does, depend. I am, Sirs, faithfully yours,

Folkestone, March 14th, 1892. C. EGERTON FITZGERALD, M.D.

MEASUREMENT OF SCHOOL CHILDREN.

A PROPOSITION has been forwarded to Mr. Shaw, the Chairman of the Rochdale School Board, from Archdeacon Wilson, proposing that some measurement of the height and weight of boys at the elementary schools should be made every five or six years, to show whether the population is improving or deteriorating physically. Archdeacon Wilson maintains that physical training is recognised as a part of elementary education, and that measurements are the only efficient results of such callisthenics, drill, or gymnastics as may be introduced into the schools which can be relied on.

Mr. Wagstaff.—The information will be found under various headings in the First Report of the Royal Commission on Vaccination, issued on Aug. 12th, 1889, and notably in the Tables supplied by Dr. William Ogle, which are contained in Appendix II., page 114.

"A CAUTION."

To the Editors of THE LANCET.

SIRS,—It having come to my knowledge that some person is writing letters to old London Hospital men, stating that the writer, Francis Joseph Pound, is in London, in bad health and desperate pecuniary circumstances, and, of course, requiring pecuniary assistance, may I ask you to be good enough to allow me to contradict this begging-letter impostor's statements, as my brother, Mr. Francis Joseph Pound, M.R.C.S.Eng. &c., is still in Fiji in the Colonial Medical Service, and in no way requiring assistance?

I am, Sirs, yours faithfully,

Cdiham, March 16th, 1892. CLEMENT POUND, L.R.C.P.Lond.

MEDICAL ETHICS AND THE LAY PRESS.

Mr. John Weller writes to us to say with regard to the paragraphs quoted by us last week from Essex papers that he "had nothing whatever to do with them, either directly or indirectly, in any shape or form." Of this we are quite sure, and gladly accept our correspondent's disclaimer. At the same time we must always hold that the insertion of such paragraphs in the lay press cannot too strongly be deprecated.

Dr. Lys will perceive that the question has entered upon a phase which renders unnecessary correspondence on the point to which he refers.

THE CARPENTER AND DUKES FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to acknowledge in THE LANCET the receipt of the follo wing additional subscriptions to the above fund?

I am, Sirs, yours faithfully,

50, George-street, Croydon, March 14th, 1892. WM. F. COLES.

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CHAPPED HANDS.

Penton writes to us to say that he has under his care a case of chapped hands which seems to defy all his efforts. They will heal for a few days; but then cracks appear, and soon deepen into bleeding cuts. Can anyone suggest a mode of treatment for such a case? Glycerine and unguents of various kinds have been tried.

Waterloo.—We must refer our correspondent to the Students' Number of THE LANCET published on Sept. 6th last.

Dr. Joseph McFarland (Philadelphia).—We must refer our correspondent to the author of the lectures.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—In your report of the meeting of the London Obstetrical Society there is a very serious error. I am reported to have said: "If the labour had not set in it should be induced." Now, I have always urged that *the operation should only be performed after labour has set in*, and when the os uteri is partially dilated. I have five cases coming during March and April, and in each case I shall operate during labour.

I am, Sirs, yours faithfully,

Glasgow, March 15th, 1892. M. CAMERON.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 17th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 11	29·55	N.W.	34	33	51	40	28	·05	Overcast
,, 12	29·56	N.W.	33	..	76	41	30	...	Hazy
,, 13	29·40	N.W.	33	..	67	42	28	...	Bright
,, 14	29·46	N.W.	32	..	65	42	29	..	Foggy
,, 15	29·66	S.W.	40	39	60	45	31	..	Cloudy
,, 16	29·86	W.	42	40	79	54	38	·18	Cloudy
,, 17	30·15	S.W.	50	48	89	57	42	·01	Cloudy

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Althaus, London; Dr. E. Blake, London; Dr. Boyle, London; Messrs. Bean and Co., London; Dr. Black, Edinburgh; Messrs. Burgoyne and Co., London; Dr. Bateman, London; Messrs. H. Burden, jun., and Co., Poole; Mr. Bagshaw, Salford; Mr. Blackwood, London; Mr. W. Buchanan, Chatham; Dr. J. Braithwaite, Leeds; Messrs. Boulton and Paul, Norwich; Messrs. Bentley and Sons, London; Mr. Stanmore Bishop, Manchester; Dr. Collier, Lincoln; Messrs. Carpenter and Westley, London; Dr. Coles, Croydon; Messrs. Crossley, Moir, and Co., London; Messrs. Cassell and Co., London; Dr. Chamberlain, Paris; Dr. Drzewiecki, Warsaw; Dr. Duhrssen, Berlin; Dr. Davis, Gateshead-on-Tyne; Mr. De Fraine, Aylesbury; Dr. Eastland, Texas; Dr. B. Fenwick, London; Mr. Field, London; Messrs. Foster, Brown, and Co., London; Dr. Fitzgerald, Folkestone; Dr. E. V. Gibson, Buxton; Mr. W. Gosse; Mr. Gloster, Walsall; Mr. Henbeck, Canning Town; Dr. Hunter, Edinburgh; Dr. Helen, Truro; Mr. Hosegood, Alexandria; Dr. Hatton, Walkden; Dr. Holman; Mr. Haigh, Bradford; Mr. Horton, London; Dr. Hedley, Brighton; Mr. Hornibrook, London; Dr. W. T. Hartahorn, Kansas; Mr. C. S. Kilner, Thingoe; Mr. Kent, Birmingham; Mr. Ling, Saxmundham; Messrs. Lloyd and Co., Leicester; Dr. Little, London; Mr. Lucy, Plymouth; Dr. R. C. Lees, Glasgow; Mr. R. E. Lord, Salford; Mr. Munkittrick; Dr. G. Macdonald, London; Mr. T. D. Mann, London; Messrs. F. L. May and Co., London; Mr. McClelland, Glasgow; Messrs. Mitchell and Co., London; Dr. Martin, Leith; Mr. Maw, Bradford; Mr. Maynard, Stourbridge; Dr. Martinez, London; Messrs. Newton, Chambers, and Co., Sheffield; Messrs. Oppenheimer Bros. and Co., London; Mr. J. Pickering Pick, London; Mr. Pinchard, Taunton; Mr. H. W. Page, London; Mr. Provand, London; Mr. Pound, Odiham; Mr. R. D. Pedley, London; Dr. Ruffer, London; Dr. Rolleston, London; Mr. Randle, Finchley; Dr. Ridge, Enfield; Dr. Ross, Christchurch; Mrs. Rowley, Bursiem; Dr. Silk, London; Dr. Steell, Manchester; Mr. S. Spokes, London; Mr. Stenhouse, Glasgow; Miss Seal, Leeds; Dr. F. J. Smith, London; Mr. Smith, Westgate-on-Sea; Mr. Sell, London; Mr. J. K. Thompson, Leeds; Mr. Turner, Felixstowe; Dr. Thresh; Mr. Tyrrell, Great Malvern; Mr. Vickers, London; Messrs. West, Newman, and Co., London; Mr. J. C. Walker, Linlithgow; Mr. Wagstaff, Leighton Buzzard; Mr. Weller, Colchester; Dr. Samuel West; Messrs. Walker and Carver, Pendleton; Mr. Wilkes, London; Messrs. Whitworth and Stuart, Manchester; Mr. C. H. Wood, London; Messrs. Wright and Co., Bristol; Dr. E. W. White, Birmingham; Mr. Wood, Barrow-in-Furness; Mr. Watson, London; Mr. Wilson, Plymouth; Mr. H. R. Whitehead, London; Dr. Williamson, Manchester; Messrs. White, London; Fairplay; J. T. H.; M. A. B.; Delta, London; F. C.; New L.S.A.; A. H. Z.; Assistant, London; Zeta, London; Clerk, Township of Manchester; Solis, London; Delta, London; Secretary, London Skin Hospital; Secretary, Derby; Beta, Sheffield; Price's Candle Co., London; Hon. Sec., Lowestoft Hospital; Maltine Manufacturing Co., Bloomsbury; Malvern, London; Secretary, Taunton and Somerset Hospital.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Butler, Carnforth; Mr. Breach, Newbury; Dr. Evans, Anglesey; Mr. Dyer, Ilfracombe; Mr. Cowley, Northwich; Mr. Thomas, Llanelly; Mr. S. Smith, London; Mr. Patterson, Durham; Mr. Trimble, Enniskillen; Mr. Tyte, Minchinhampton; Mr. Strinock, Golspie; Mr. Woodman, Bridgwater; Surgeon-Captain Addison, Netley; Messrs. Murany and Co., Paris; Dr. Gardiner, Ashton-under-Lyne; Dr. Godber, South Bank; Mr. Sotheran, York; Dr. Grabham, Madeira; Messrs. E and S. Livingstone, Edinburgh; Mr. Simpson, York; Mr. Evans, Llanberis; Mr. Draper, Huddersfield; Dr. Harris, London; Mr. Hounsell, Bournemouth; Mr. Richardson, Staplehurst; Mr. Badger, Small Heath; Miss Crefandi, Norwich; Mr. Nicolet, Ascot; Mr. Norman, Salisbury; Dr. Griffith, London; Mr. Tully, Hastings; Dr. Gibant, Jersey; Mr. Gordon, Oban, N.B.; Mr. Gilchrist, Darlington; Dr. P. Hehri, Bengal; Dr. Grant, Ontario; Dr. Langley, Wilts; Mr. Lund, Newcastle-on-Tyne; Mr. Kelvin, Manchester; Mr. Warburton Treherbert; Mrs. Ross, Manchester; Mr. Terry, Bath; Dr. Hamilton, Burton-on-Trent; Mr. Mackay, Darlington; Mr. Lewis, Wingham; Mrs. Campbell, London; Miss Hooper, London; Mr. Bolton, Blackburn; Dr. Dickey, Colne; Dr. Butler, London; Messrs. Roberts and Vivian, Southgate; Mr. Wilson, Dublin; Mrs. McLintock, Church Stretton; Dr. Snow, London; Mr. Maskew, Fawley; Messrs. Moore and Co., London; Mr. Anderson, Carmarthen; Mr. Gregson, Southend; Mr. Paterson, Durham; Mr. Shannon, Consett; Mr. Daniell, Anerley; Mr. Ling, Suffolk; Dr. Waters, Liverpool; Mr. Bullin, Cork; N. D. L., London; X., London; Diatom, London; International News Co., London; Net, London; Vernon, Sheffield; Hackney Furnishing Co., London; T. S., London; X. A., London; Smedley's Hydropathic Establishment, Matlock; Cantab, London; Secretary, Hospital for Consumption, Manchester; Dr. X., Liverpool; Fides, London; Class Rooms, Edinburgh; Partner, London; Secretary, Wirrall Children's Hospital, Birkenhead; Feliciter, London; Secretary, Medical Society of London; Domus, London; Patient, London; Felix, London; H. E., London; Immediate, London; Permanency, London; Forceps, Birmingham; Surgeon, Bristol; Locum, Leicester; Dorothy, London; Medical, London; S. E., London; Beta, London; Lux, London; D. T., Garnant; Victor, London; Warren, London; Surrey, London; M. J., Sheffield; Medicus, London; Western, London; Eureka, London; Graduate, Edinburgh; X. Y. Z., London.

NEWSPAPERS.—*Glasgow Herald, Liverpool Courier, Warrington Observer, Leicester Daily Post, Scotsman, City Press, Sheffield Telegraph, Sydney Morning Herald, Manchester Courier, East Anglian Times, Birmingham Gazette, Cape Argus Weekly, East Sussex News, Scottish Leader, Liverpool Daily Post, Insurance Record, Weekly Free Press and Aberdeen Herald, Bristol Mercury, Yorkshire Post, Times of India, Leeds Mercury, Cork Constitution, Local Government Chronicle, Pioneer Mail (Allahabad), Mining Journal, Reading Mercury, Surrey Advertiser, Law Journal, Hertfordshire Mercury, Windsor and Eton Express, West Middlesex Advertiser, Preston Herald, Builder, Hertfordshire Standard, Citizen, Lynn Advertiser, Newspaper Review, Nottingham Guardian, Le Temps (Paris), Architect, Wetherby News, Wellington Post, Hereford Mercury, Leigh Chronicle, West Middlesex Standard, Lichfield Mercury, Melbourne Argus, Journal of Gaslighting, Kentish Mercury, Woodford Times, St. Austell News, Windsor and Eton Gazette, Hastings and St. Leonards News, The Tocsin*, &c., have been received.

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